EVALUATION OF THE INTERLABORATORY COMPARISON TEST

Chlorinated hydrocarbons (CHC) and BTEX & C5-C10 – CBL03

Sample dispatch on *24th October 2017*

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1 Description of the Interlaboratory comparison test: CHC and BTEX & C5-C10 – CBL03

1.1 Participants and time schedule

- Number of registrations: 25
- Number of submitted data records: 25
- Dispatch of samples: 24th October 2017
- Closing date for submission of data: 21st November 2017

For the interlaboratory comparison test CBL03 the participants could participate in CL04 (CHC) and/or BL05 (BTEX & C5-C10).

To anonymize results, each laboratory was given a laboratory code on a random basis.

1.2 Sampling, sample material and distribution

Activated Orbo 32S-charcoal tubes (Supelco) were loaded using a certified calibration gas (Air Liquide). One tube was loaded with cis-1,2-Dichlorethene, trans-1,2-Dichlorethene, Trichloromethane, 1,1,1-Trichloroethane, Trichloroethene, Tetrachloromethane and Tetrachloroethene (CL04) and another tube was loaded with benzene, ethylbenzene o-, m- and p- xylene, toluene, n-Pentane, n-Hexane, n-Heptane, n-Octane, n-Nonane and n-Decane (BL05). In addition to CL04 and BL05, respectively, an unloaded activated charcoal tube was made available to determine the blank value. The tubes were loaded using a t-piece under pressure-less condition. The samples were prepared in two series (CL04 and BL05) using a pump with a continuous and defined flow. The flow of the pump was controlled before as well as after the loading of the tubes. The charcoal tubes were loaded on 23rd October 2017 and dispatched on 24th October 2017.

Each participant received (according to the order):
1 loaded charcoal tube for the interlaboratory comparison test CL04 and/or
1 loaded charcoal tube for the interlaboratory comparison test BL05

1 unloaded charcoal tube (blank)

1.3 Control testing

During sampling, aliquots of each sample were collected randomly for control testing.

In the parameter-oriented evaluation, the results of the control testing are given in the form of arithmetic means of the detected concentrations as control test value ± U.

2 Evaluation

The analytical results had to be made available to the organiser not later than 21st November 2017. Any values received at a later date were not considered. A statistical evaluation of interlaboratory comparison data was only carried out if at least 6 valid results per parameter were available.

To evaluate the data, outliers were detected first by using the outlier test method according to Hampel. Values identified as conspicuous by this test method are marked specifically in the parameter-oriented evaluation.

Further evaluation was performed in accordance with DIN ISO 5725-2. Results < LOQ or < LOD are not taken into account for calculation.

Target value

Normally the mean of all valid participants' results without outliers can be defined as target value.

In exceptional cases (for example if variation between results of participants is high, e.g. RSD > 50 %), this approach is not suitable and no target value or an independently confirmed target value must be assigned. The procedure for the assignment of the target values is described in section 4.

The target value is used as a basis for the calculation of recovery rates and z-scores.

z-Score

$$z-score = \frac{x_i - \overline{X}}{Criteria}$$

In this context,

x_i individual result of the participating laboratory

$\overline{X}$ target value
(normally: the average value of the participants' results after removal of outliers; if this approach is not applicable, the detailed procedure for the assignment of the target value is given in section 4)

Criteria   normally: the reproducibility standard deviation (sR), calculated from the participants' results (after removal of outliers) in the relevant test round. If the relative reproducibility standard deviation (RSD) is higher than 50 % the criteria is limited at least to a value corresponding to the RSD at a maximum of 50 %.Further information is given in section 4.

Interpretation of z-Scores in the parameter-oriented evaluation:

- $|z| < 2$ result: good
- $2 < |z| < 3$ result: questionable
- $|z| > 3$ result: not satisfactory

3   Representation and interpretation of measurement results

The parameter oriented report shows the measurement values including uncertainty, recovery rate, calculated z-Score and the outliers in tabular form. The results listed in the table are also represented graphically.

The laboratory oriented report shows the results of the individual laboratories, including the recovery rates and z-Scores.

An annotation of the tables and graphics is given in section 5.

4   Explanatory notes

General

As explained in section 2, the z-Score is calculated using the reproducibility standard deviation, calculated from the participants' results (after removal of outliers) in the relevant test round. As a consequence it might occur that the z-Score between -2 and 2 covers an extraordinary range, due to a high variance of the results.

The recovery rate is calculated for the individual result based on the target value. Therefore, in the case of a high variance of the results, participants should also consider recovery rates as an indicator for the necessity of internal quality assurance measures.

Parameter cis-1,2-Dichloroethene

The reproducibility standard deviation (RSD) for cis-1,2-Dichloroethene was 53 %.

Therefore the assignment of the target value and the criteria based on the statistical data of all participants' results without outliers was not appropriate.

Due to the low variation between the results of n = 5 randomly chosen activated charcoal tubes of the control test laboratory (RSD 4 % for n = 5) and due to the comparatively low variation of the participants' results for the vast majority of the other parameters, an inhomogeneity during filling the activated charcoal tubes as a possible cause for the observed spread of results could be excluded with high probability.

The mean of the control test laboratory was defined as target value. The criteria was set to 25 % (corresponding to 3 times of the standard deviation of the control test laboratory and a safety factor of 2; rounded).

Parameter trans-1,2-Dichloroethene

Similar to cis-1,2-Dichloroethene also trans-1,2-Dichloroethene showed a high variation between the results of the participants of 66 %.

By analogy with cis-1,2-Dichloroethene the mean of the control test laboratory was defined as target value. The criteria was set to 25 % (corresponding to 3 times of the standard deviation of the control test laboratory and a safety factor of 2; rounded).

5 Annotations on tables and charts

5.1 Information and abbreviations in tables

Parameter	Analyte identifier
Sample	Sample identifier
Unit	Given unit for result and uncertainty (e.g. µg/l)
Mean	Mean of the participants results, without outliers (3 significant digits)
CI (99 %)	99 % confidence interval (3 significant digits)
Minimum	Minimum of all submitted results, after removal of outliers (3 significant digits)
Maximum	Maximum of all submitted results, after removal of outliers (3 significant digits)
SD	Reproducibility standard deviation, calculated from the participants results, after removal of outliers (3 significant digits)
RSD %	Reproducibility standard deviation, calculated from the participants results relative to the target value, given in %, after removal of outliers (2 significant digits)
Control test value ± U	Mean of control test value ± measurement uncertainty (3 significant digits)
Labcode	Laboratory identifier (anonymized)
Result	Result as indicated by participant (max. 5 decimal places)
± U	Results uncertainty as indicated by participant (max. 5 decimal places)
LOQ	Limit of quantification
LOD	Limit of detection
Recovery	Recovery rate in % based on target value (3 significant digits, max. one decimal place given)
z-Score	Deviation of result based on target value depicted as a multiple of the criteria (3 significant digits, max. 2 decimal places given)
-	*No data available*
Comments	Comment on the respective result (e.g. H, FN, FP)
H	Outlier according to Hampel-Test
FN	False negative – for a result < LOQ or result < LOD: The absolute value of the LOQ or LOD fulfils the condition of an outlier according to the Hampel test.
FP	False positive – for parameters where no target value is available because of a too low analyte content (n < 6):

	Result that exceeds the median of the absolute values of the transmitted LOQs or LODs by more than 100 %.
Standard deviation	Reproducibility standard deviation, calculated from the participants results (3 significant digits)
Rel. standard deviation	Reproducibility standard deviation, calculated from the participants results relative to the target value, given in %, (3 significant digits)
n	Number of results
Target value	Mean of the participants results, without outliers (3 significant digits), unless stated otherwise in section 4
Criteria	Criteria for z-Score calculation. The given value matches the reproducibility standard deviation, calculated from the participants' results, after removal of outliers (3 significant digits), unless stated otherwise in section 4

5.2 Graphical presentation of results

Example chart: Results
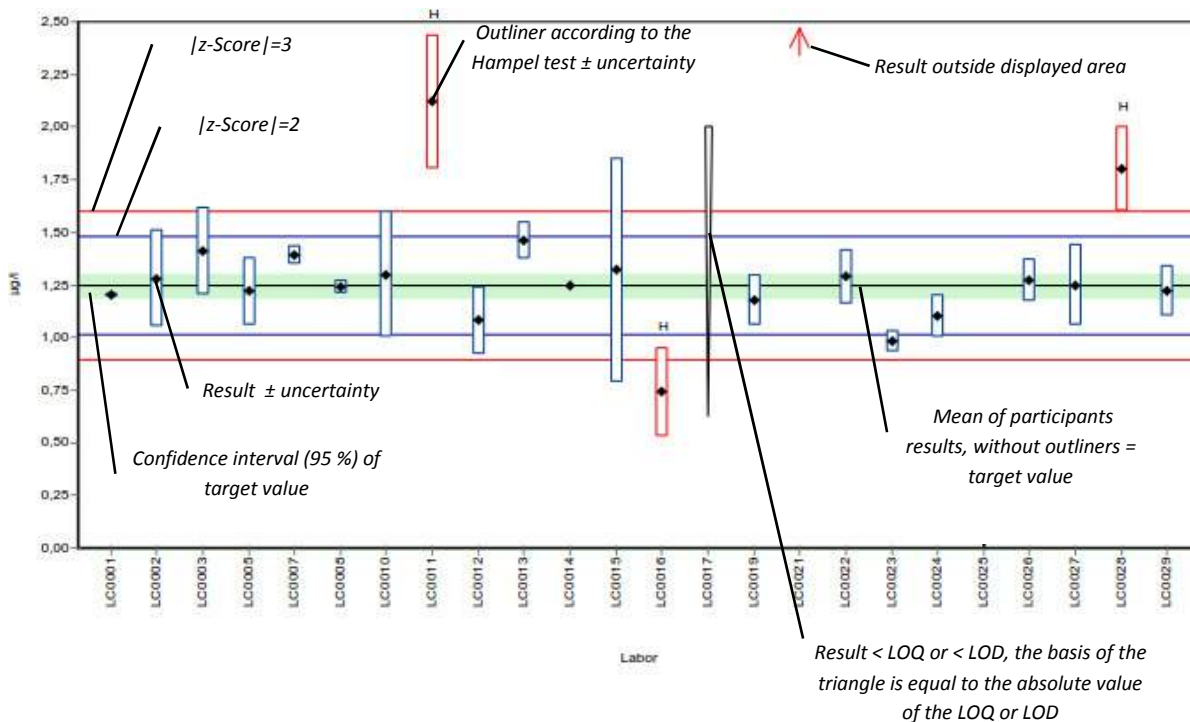
Example chart: Recovery
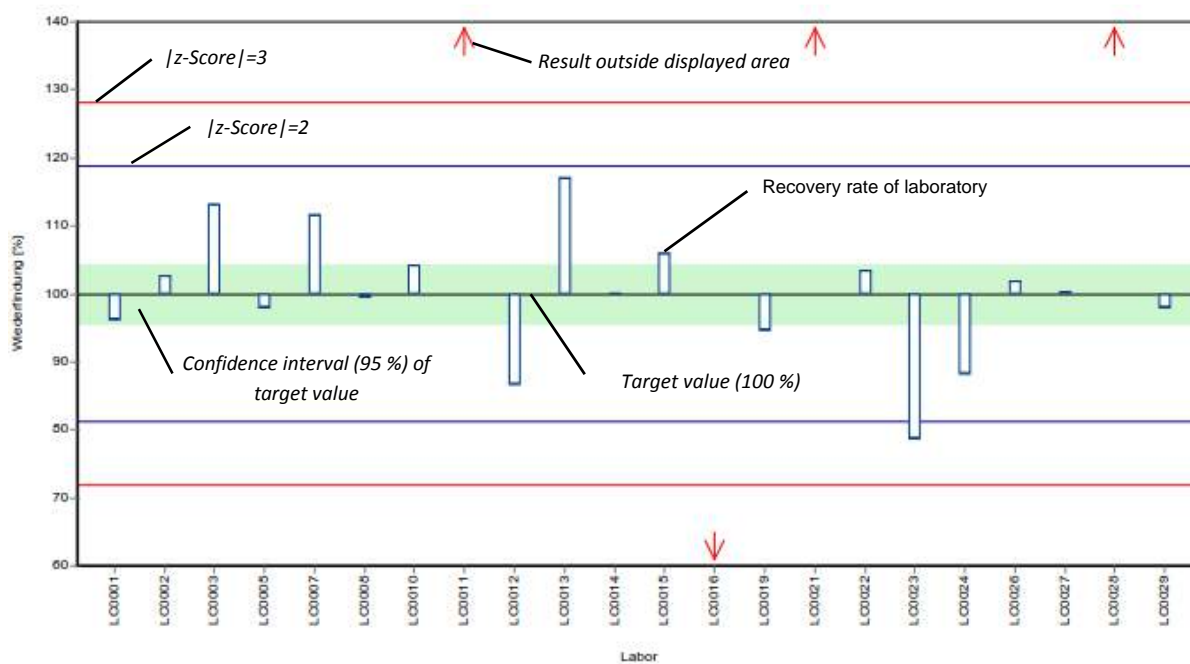
Example chart: z-score

Example chart: z-score - laboratory oriented report

6 Summary of results, after removal of outliers

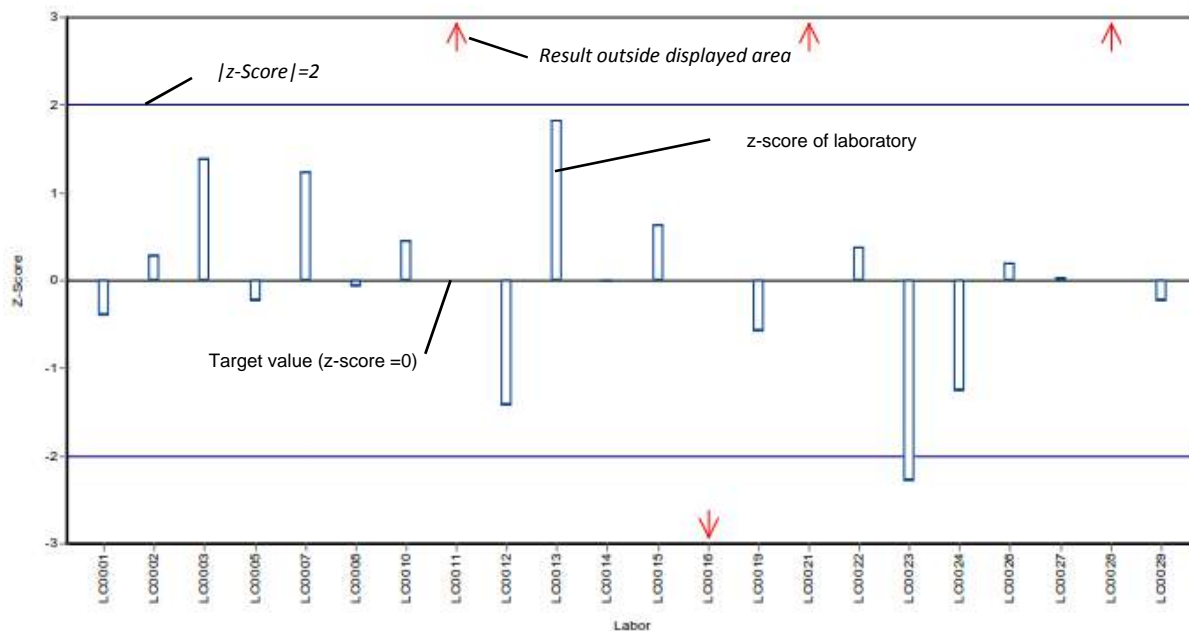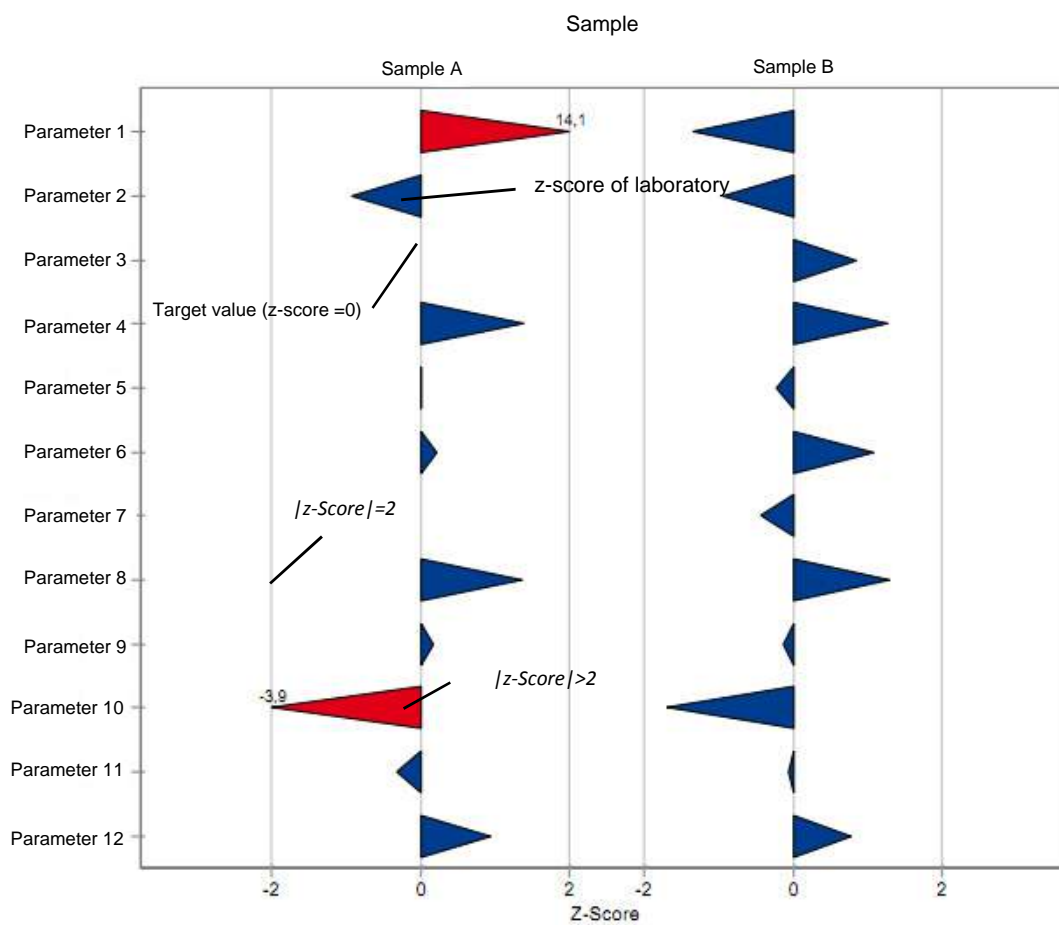| Parameter	Sample	Unit	Number of results for calculation	Number of outliers	Mean	±	CI (99%)	Target value*	±	Criteria	Minimum	Maximum	SD	RSD %
Benzene	BL05	µg/tube	17	6	6.27	±	0.556				4.2	7.44	0.764	12
Ethylbenzene	BL05	µg/tube	19	4	7.45	±	1.03				5.16	10.8	1.5	20
o-Xylene	BL05	µg/tube	19	4	6.96	±	1.21				4	11	1.76	25
Sum of m-Xylene and p-Xylene	BL05	µg/tube	18	5	14.2	±	2.08				9.8	22.5	2.94	21
Toluene	BL05	µg/tube	18	5	6.95	±	0.856				5.34	10.7	1.21	17
n-Decane	BL05	µg/tube	13	1	5.76	±	1.18				3.98	8.1	1.42	25
n-Heptane	BL05	µg/tube	15	0	8.76	±	1.24				6.59	12.2	1.61	18
n-Hexane	BL05	µg/tube	11	3	7.54	±	1.27				5.2	9.96	1.41	19
n-Nonane	BL05	µg/tube	15	0	7.7	±	1.65				5.08	13.1	2.13	28
n-Octane	BL05	µg/tube	15	0	8.23	±	1.3				5.93	12.7	1.67	20
n-Pentane	BL05	µg/tube	14	0	8.54	±	2.54				2.72	13	3.17	37
1,1,1-Trichloroethane	CL04	µg/tube	15	5	7.58	±	0.377				6.3	8.4	0.486	6.4
cis-1,2-Dichloroethene	CL04	µg/tube	19	0	4.75*	±	1.75	5.42*	±	1.36	0.012	11	2.54	53
Tetrachloroethene	CL04	µg/tube	17	3	8.63	±	0.993				5.8	11.6	1.36	16
Tetrachloromethane	CL04	µg/tube	15	4	9.2	±	0.463				8	10.4	0.598	6.5
trans-1,2-Dichloroethene	CL04	µg/tube	19	0	4.22*	±	1.93	5.40*	±	1.35	0.007	11	2.8	66
Trichloroethene	CL04	µg/tube	16	4	7.27	±	0.832				4.5	9.7	1.11	15
Trichloromethane	CL04	µg/tube	16	4	7.01	±	0.409				6.2	8.1	0.545	7.8

* see Section 4 Explanatory Notes

7 Parameter oriented report

Parameter oriented report

BL05 - BTEX & C5-C10

Benzene

Unit	µg/tube
Mean ± CI (99%)	6.27 ± 0.556
Minimum - Maximum	4.2 - 7.44
Control test value ± U	6.18 ± 0.115

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	8.9	3.6	142	3.44	H
LC0003	1.07	0.21	17.1	-6.81	H
LC0004	6	0.65	95.7	-0.35	
LC0005	6.7	1.3	107	0.56	
LC0006	6.56	1.31	105	0.38	
LC0007	6.5	1.08	104	0.3	
LC0008	6.74	1.01	107	0.61	
LC0009	6.33	1.39	101	0.08	
LC0010	5.5	0.58	87.7	-1.01	
LC0011	5.18	1.05	82.6	-1.43	
LC0012	19.1	1	305	16.8	H
LC0013	6.3	0.69	100	0.04	
LC0014	6.55	1.31	104	0.36	
LC0015	6.55	1.5	104	0.36	
LC0016	6.2	2	98.9	-0.09	
LC0017	4.2	0.4	67	-2.71	
LC0018	7.44	0.695	119	1.53	
LC0020	12	2.4	191	7.5	H
LC0021	6.54	-	104	0.35	
LC0022	1.68	0.01	26.8	-6.01	H
LC0023	0.019	0.004	0.3	-8.18	H
LC0024	6.045	0.17	96.4	-0.3	
LC0025	7.27	-	116	1.31	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.49 ± 2.31	6.27 ± 0.556	µg/tube
Minimum	0.019	4.2	µg/tube
Maximum	19.1	7.44	µg/tube
Standard deviation	3.69	0.764	µg/tube
rel. Standard deviation	56.8	12.2	%
n	23	17	-

Graphical presentation of results

Results

Laboratory
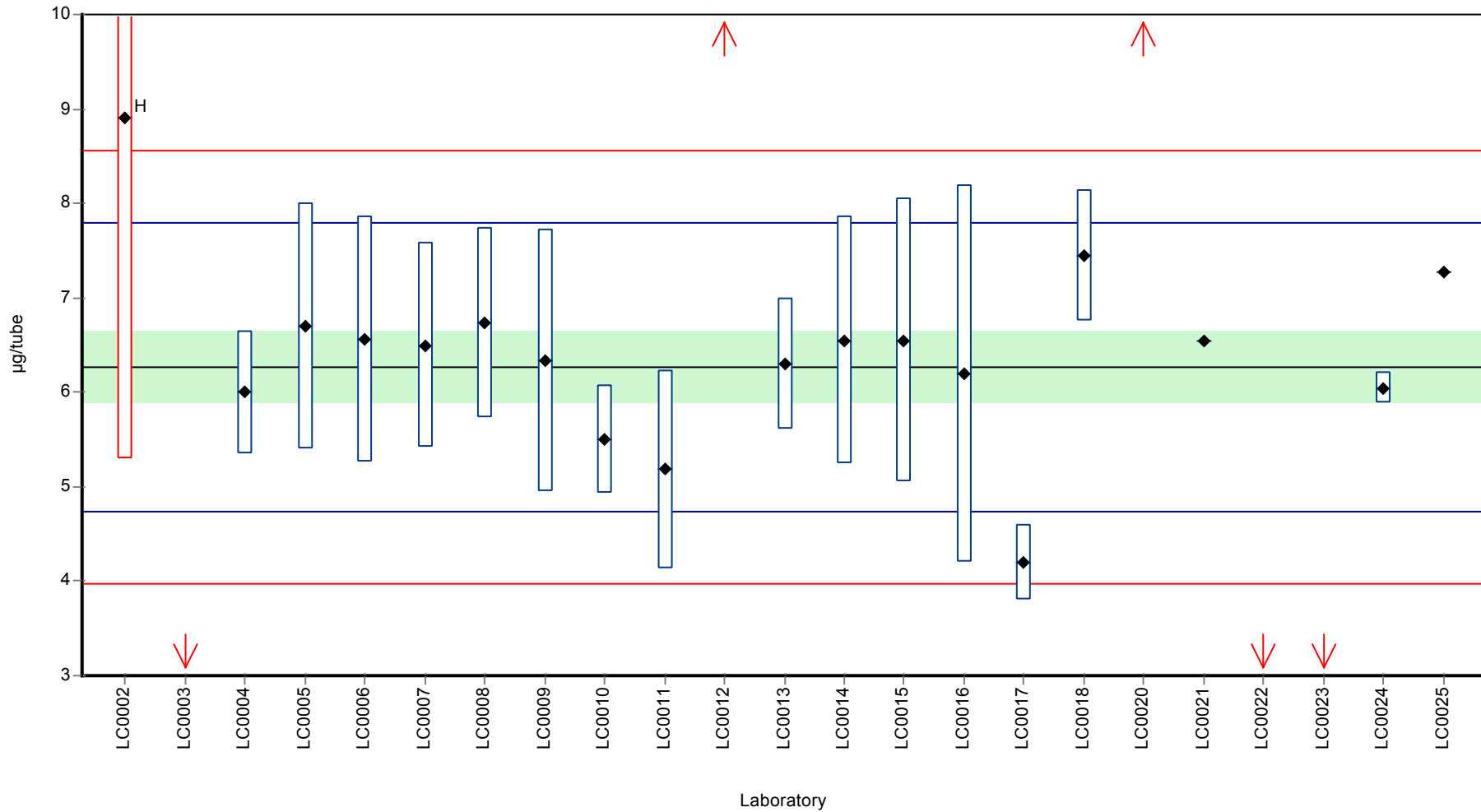
Recovery rate
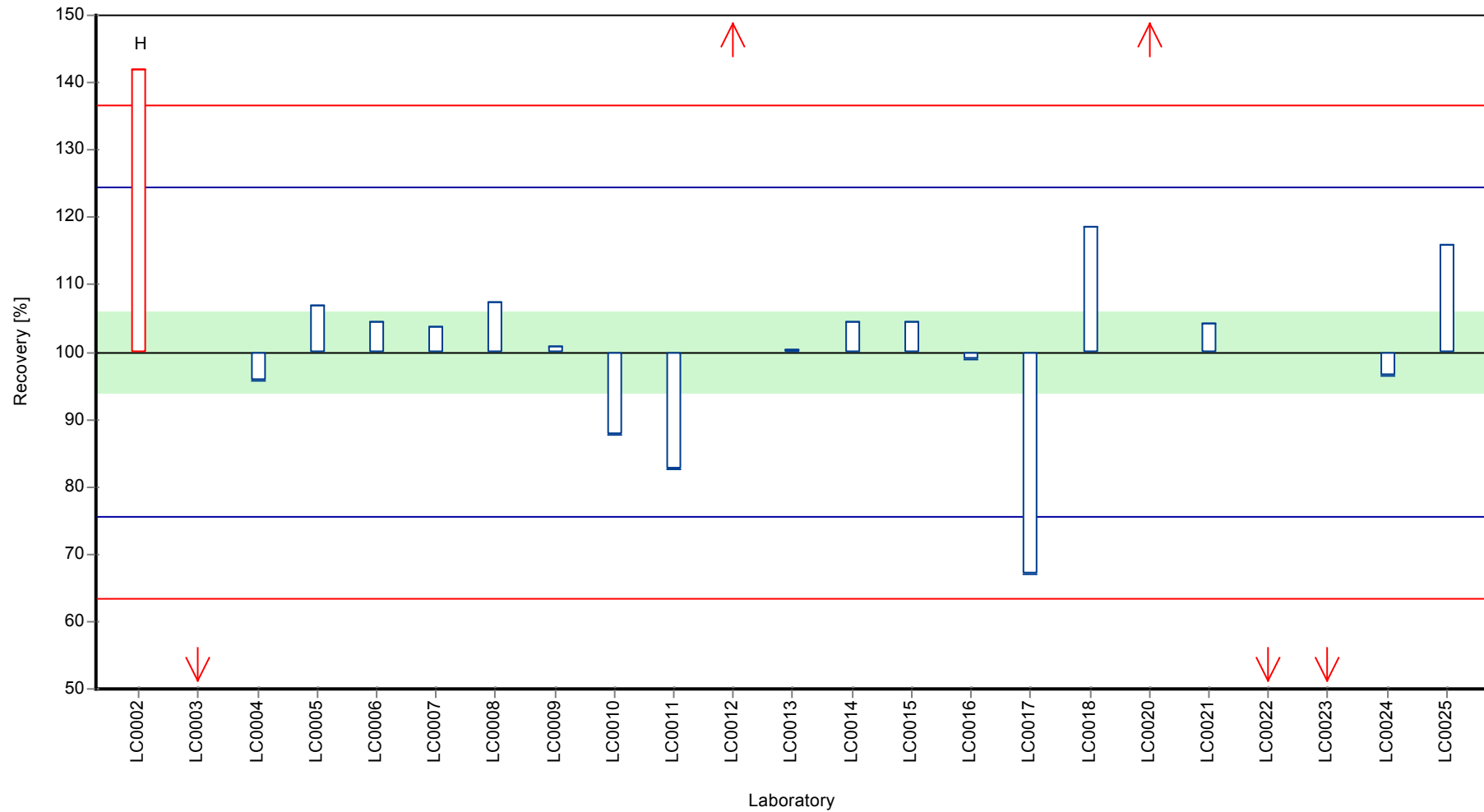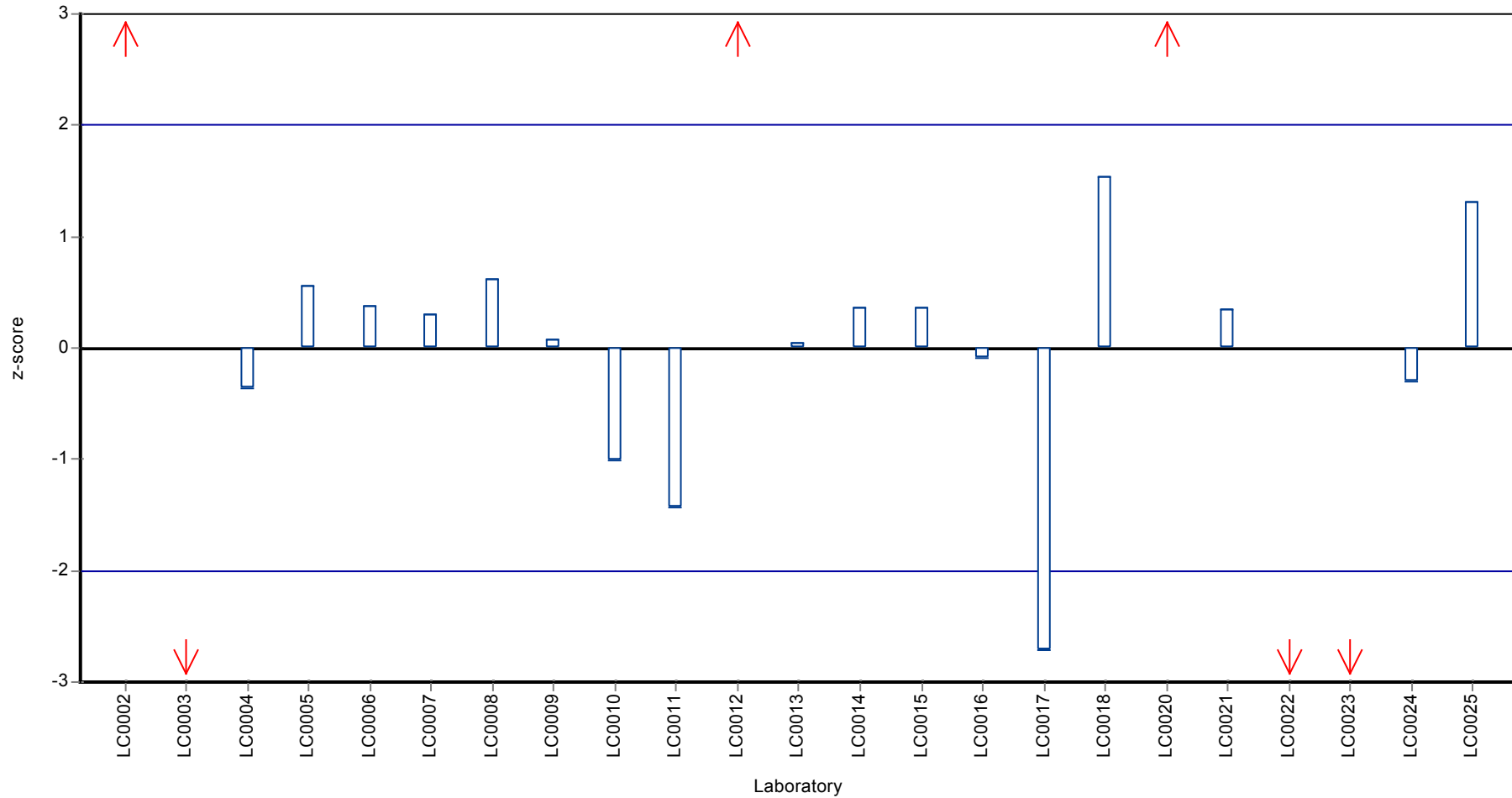
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

Ethylbenzene

Unit	µg/tube
Mean ± CI (99%)	7.45 ± 1.03
Minimum - Maximum	5.16 - 10.8
Control test value ± U	7.7 ± 0.31

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	9.5	3.8	128	1.37	
LC0003	1.27	0.25	17	-4.12	H
LC0004	7.3	0.79	98	-0.1	
LC0005	7.5	1.5	101	0.03	
LC0006	7.25	1.45	97.3	-0.13	
LC0007	8	1.06	107	0.37	
LC0008	8.33	1.25	112	0.59	
LC0009	7.6	1.67	102	0.1	
LC0010	7.1	1.12	95.3	-0.23	
LC0011	6.14	1.22	82.4	-0.87	
LC0012	9.93	0.5	133	1.65	
LC0013	7.3	0.8	98	-0.1	
LC0014	8.83	1.76	119	0.92	
LC0015	5.88	1.5	78.9	-1.05	
LC0016	6.5	2	87.3	-0.63	
LC0017	5.6	0.6	75.2	-1.23	
LC0018	10.75	0.41	144	2.2	
LC0020	14	2.8	188	4.37	H
LC0021	5.16	-	69.3	-1.53	
LC0022	1.39	0.01	18.7	-4.04	H
LC0023	0.019	0.004	0.3	-4.95	H
LC0024	6.783	0.28	91.1	-0.44	
LC0025	6.09	-	81.7	-0.91	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.88 ± 1.91	7.45 ± 1.03	µg/tube
Minimum	0.019	5.16	µg/tube
Maximum	14	10.8	µg/tube
Standard deviation	3.06	1.5	µg/tube
rel. Standard deviation	44.5	20.1	%
n	23	19	-

Graphical presentation of results
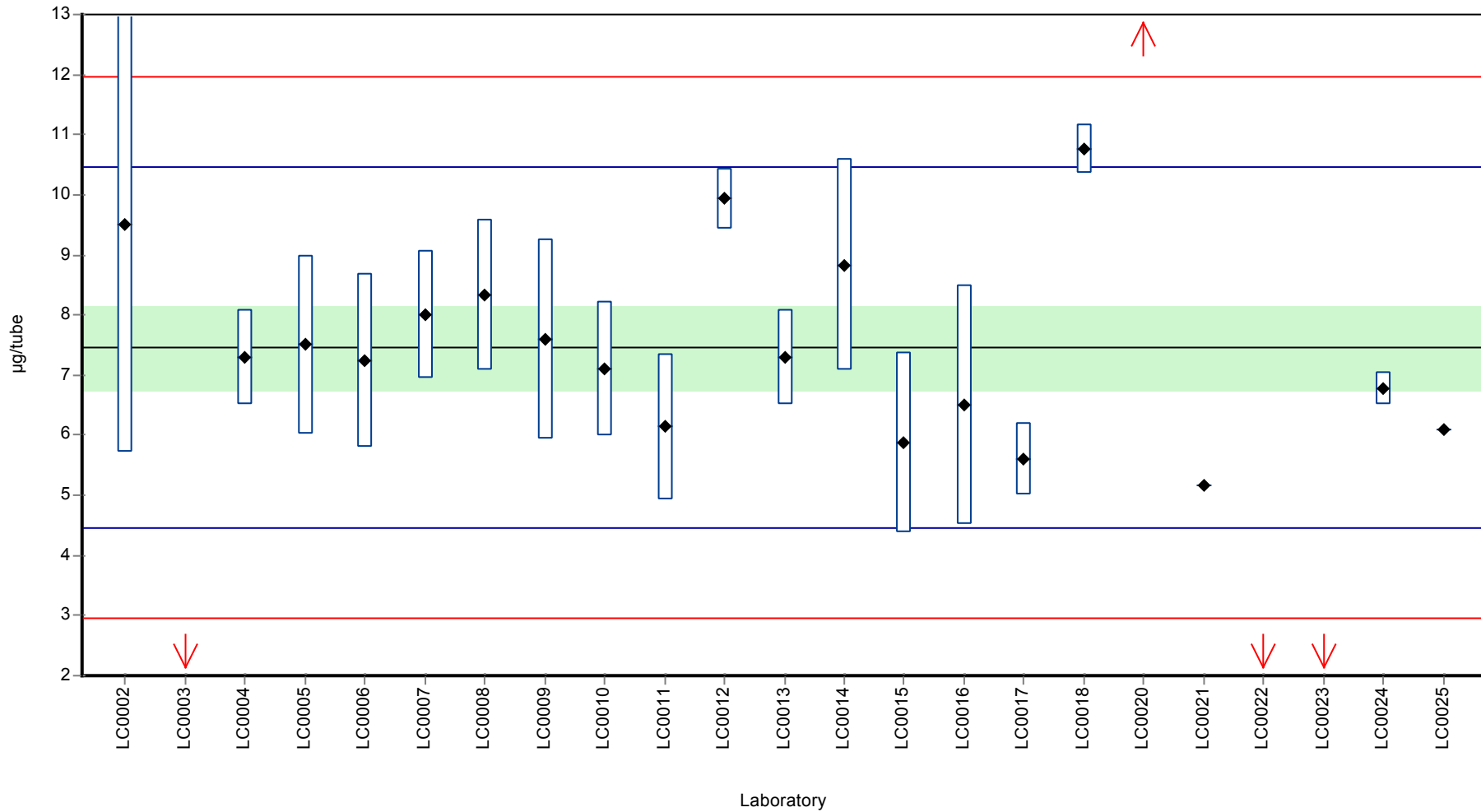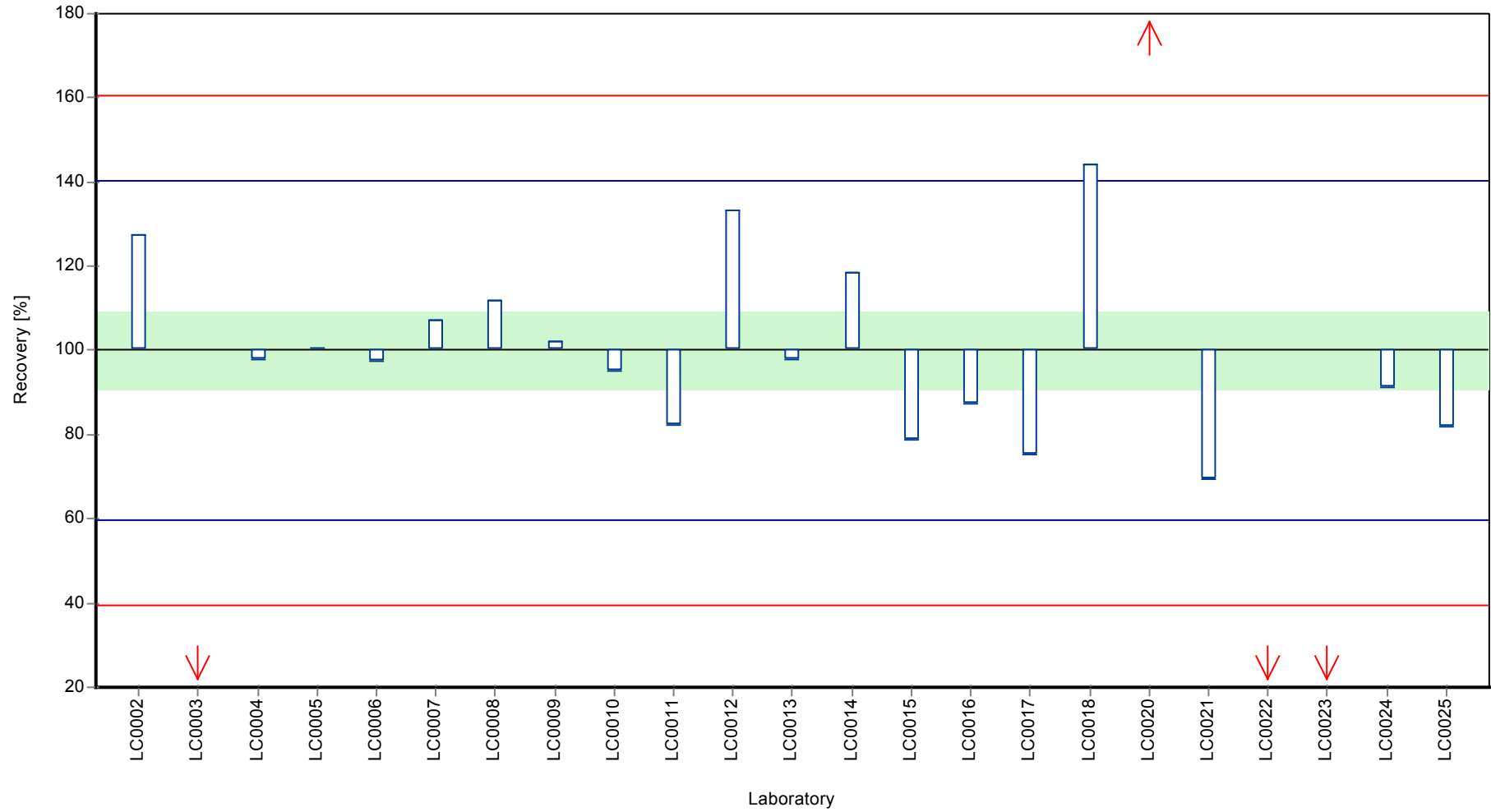
Results

Recovery rate
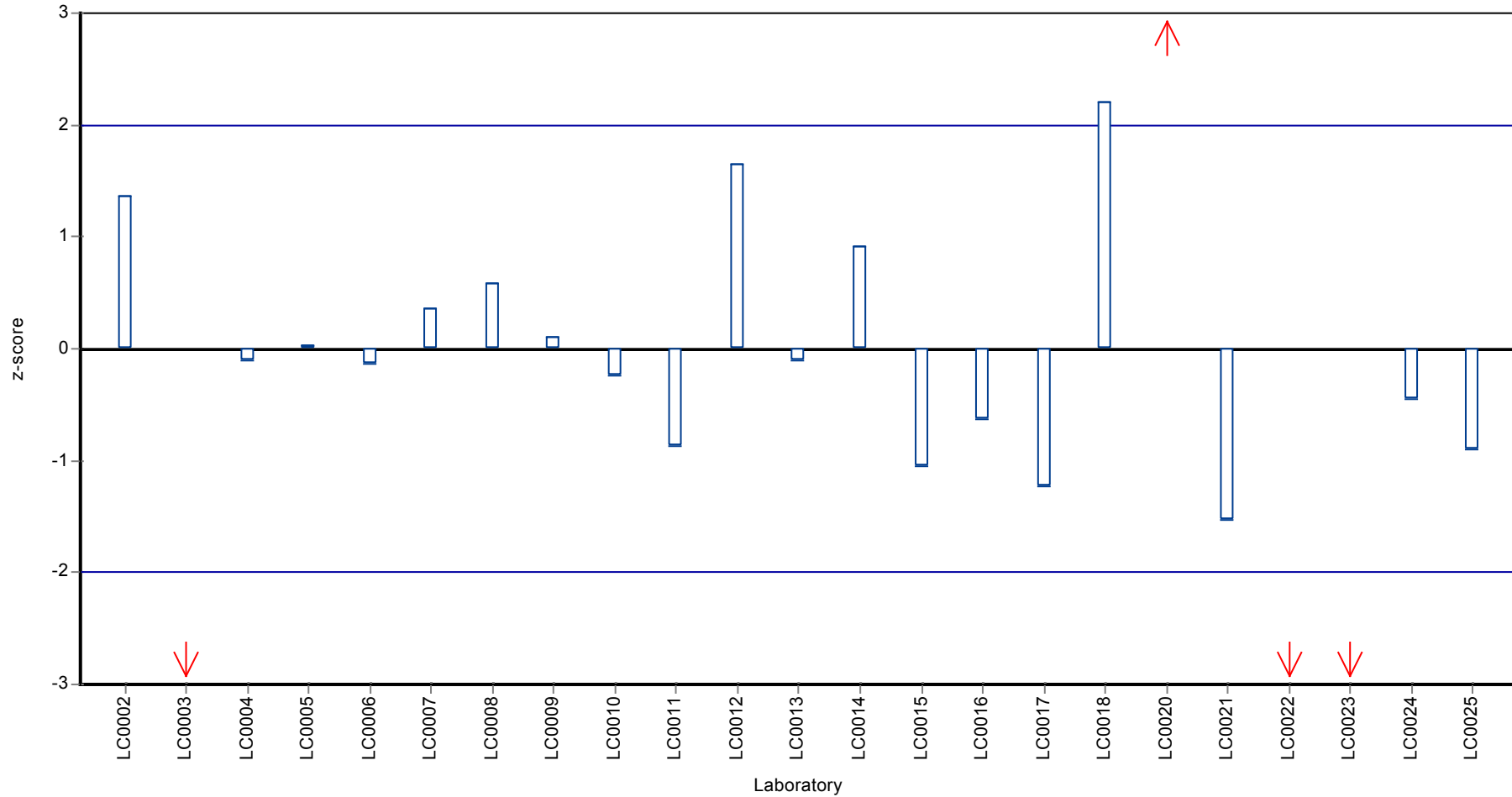
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

o-Xylene

Unit	µg/tube
Mean ± CI (99%)	6.96 ± 1.21
Minimum - Maximum	4 - 11
Control test value ± U	7.3 ± 0.343

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	8.1	3.2	116	0.65	
LC0003	1.33	0.27	19.1	-3.2	H
LC0004	7.1	0.8	102	0.08	
LC0005	7.1	1.4	102	0.08	
LC0006	7.14	1.43	103	0.1	
LC0007	6.97	1.4	100	0.00	
LC0008	7.56	1.13	109	0.34	
LC0009	7.25	1.6	104	0.16	
LC0010	5.2	1.05	74.7	-1	
LC0011	5.02	1	72.1	-1.1	
LC0012	10.6	0.5	152	2.06	
LC0013	6.11	0.67	87.7	-0.48	
LC0014	8.24	1.65	118	0.72	
LC0015	6.19	1.5	88.9	-0.44	
LC0016	6.6	2	94.8	-0.21	
LC0017	4	0.4	57.4	-1.68	
LC0018	10.967	0.543	157	2.27	
LC0020	13	2.6	187	3.43	H
LC0021	4.58	-	65.8	-1.35	
LC0022	1.1	0.01	15.8	-3.33	H
LC0023	0.02	0.004	0.3	-3.94	H
LC0024	6.406	0.29	92	-0.32	
LC0025	7.18	-	103	0.12	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.42 ± 1.89	6.96 ± 1.21	µg/tube
Minimum	0.02	4	µg/tube
Maximum	13	11	µg/tube
Standard deviation	3.01	1.76	µg/tube
rel. Standard deviation	46.9	25.3	%
n	23	19	-
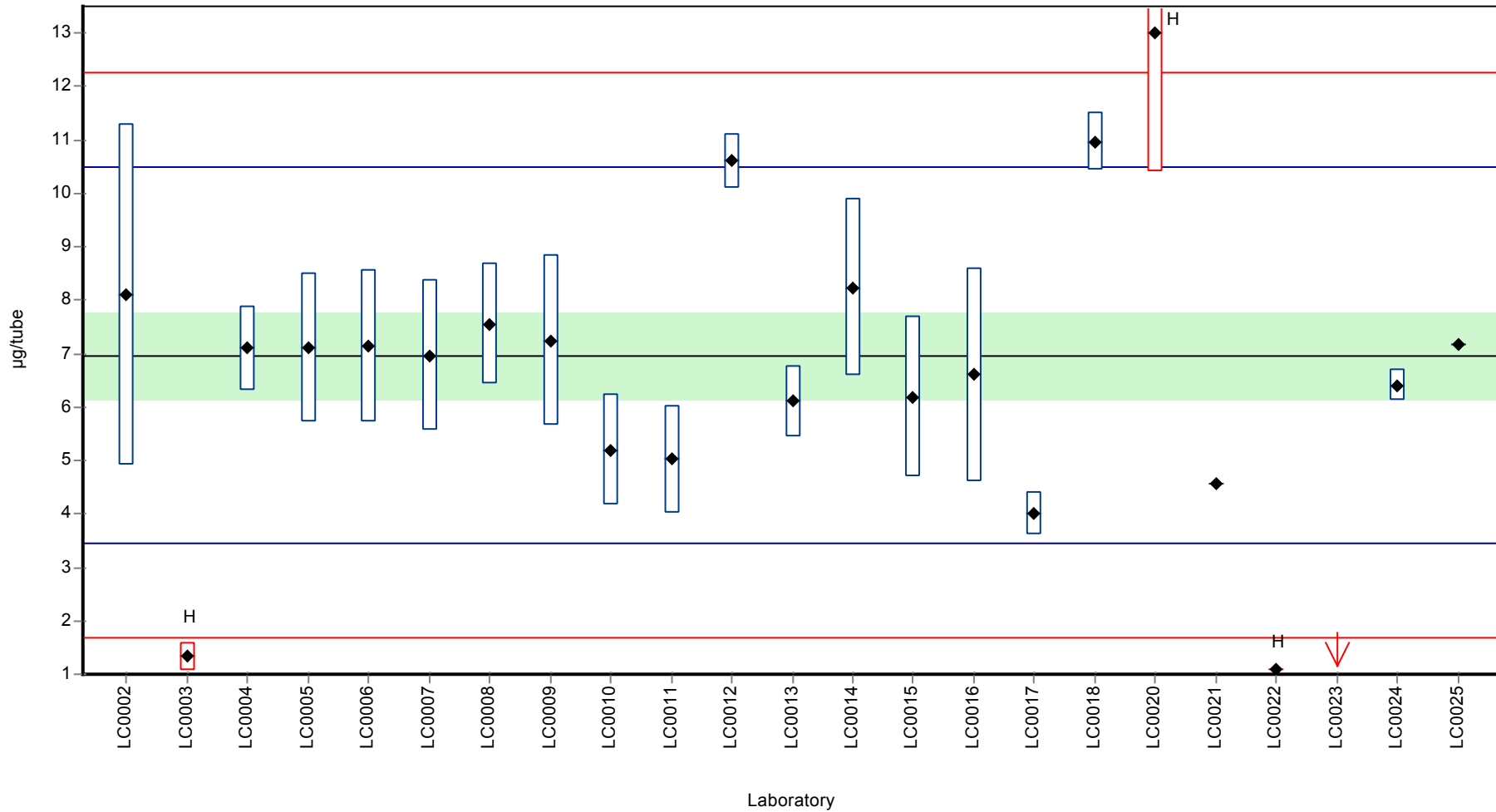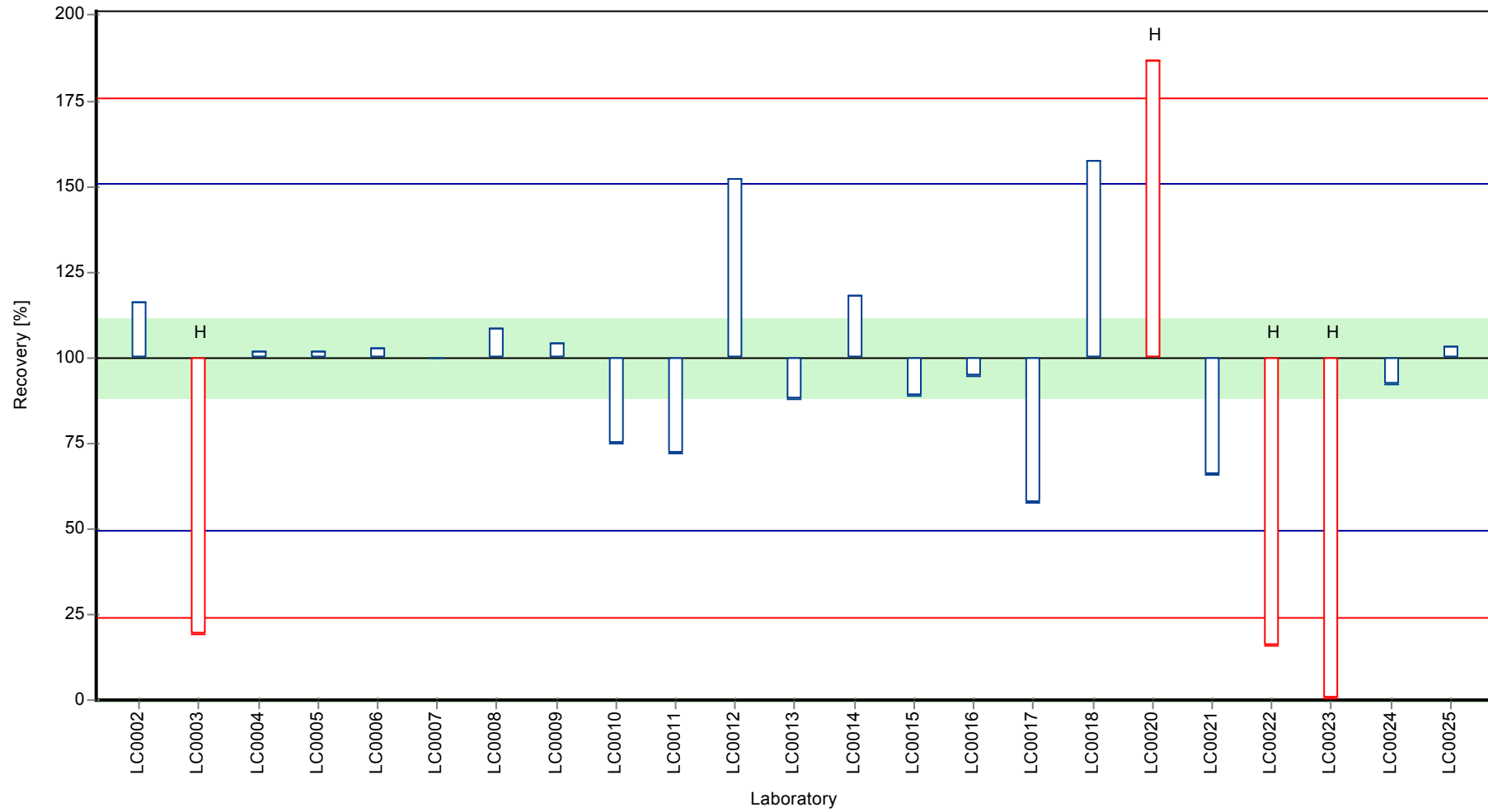
ENVIRONMENT
AGENCY AUSTRIA **umwelt**bundesamt

Graphical presentation of results

Results

Recovery rate
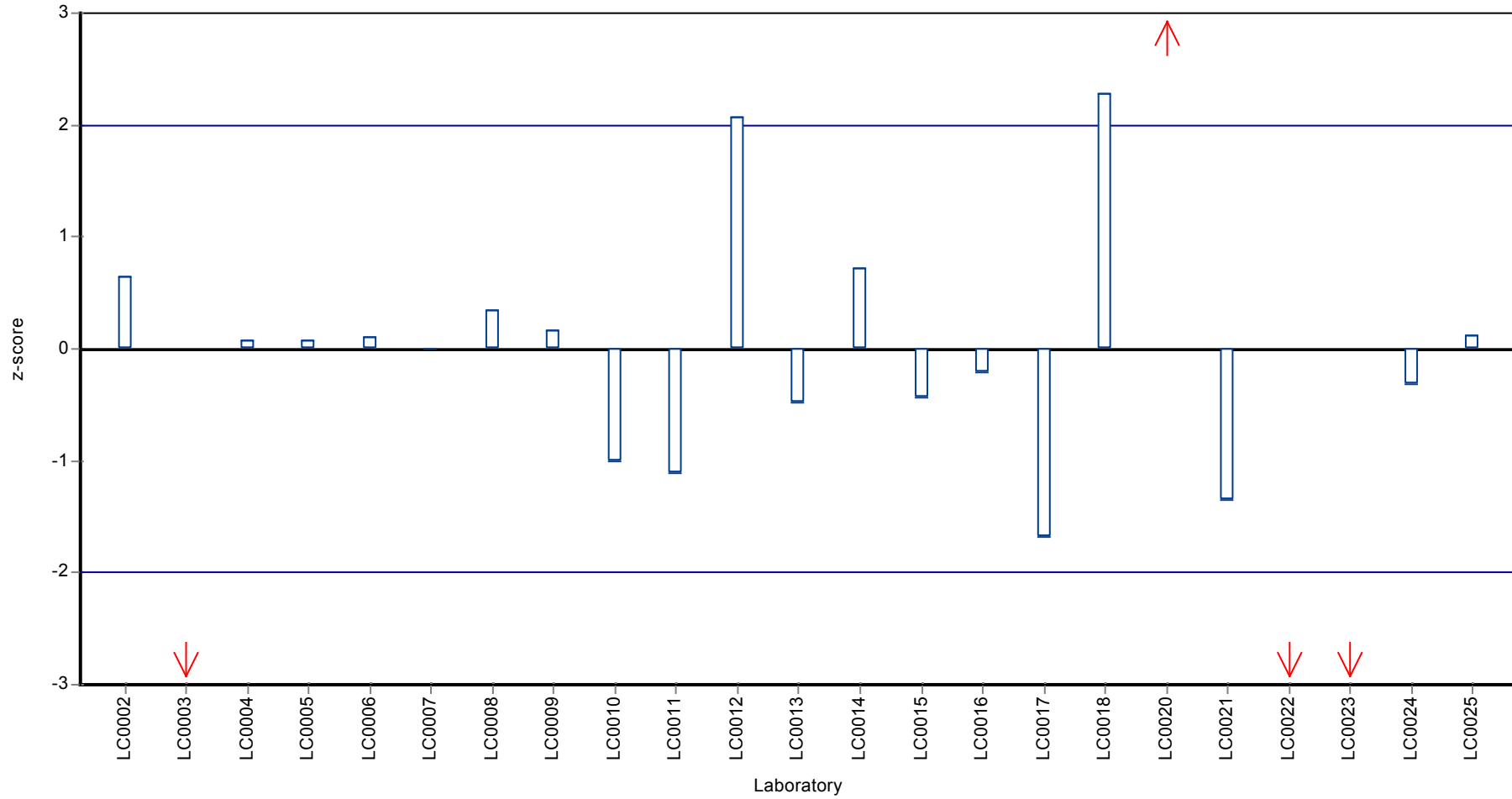
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

Sum of m-Xylene and p-Xylene

Unit	µg/tube
Mean ± CI (99%)	14.2 ± 2.08
Minimum - Maximum	9.8 - 22.5
Control test value ± U	14.8 ± 0.7

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	18.5	7.4	130	1.46	
LC0003	2.42	0.48	17	-4.01	H
LC0004	14	1.6	98.5	-0.07	
LC0005	14.8	3	104	0.2	
LC0006	13.87	2.77	97.6	-0.12	
LC0007	14.87	1.4	105	0.22	
LC0008	16.08	2.41	113	0.63	
LC0009	14.52	3.19	102	0.1	
LC0010	12.2	2.28	85.8	-0.69	
LC0011	28	3.46	197	4.69	H
LC0012	11.5	0.5	80.9	-0.92	
LC0013	14.04	1.54	98.8	-0.06	
LC0014	15.94	3.19	112	0.59	
LC0015	12.7	3	89.3	-0.52	
LC0016	14	3	98.5	-0.07	
LC0017	9.8	1	68.9	-1.5	
LC0018	22.473	1.148	158	2.81	
LC0020	53	10.6	373	13.2	H
LC0021	10	-	70.3	-1.43	
LC0022	2.76	0.01	19.4	-3.9	H
LC0023	0.041	0.008	0.3	-4.82	H
LC0024	12.99	0.44	91.4	-0.42	
LC0025	13.6	-	95.7	-0.21	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	14.9 ± 6.4	14.2 ± 2.08	µg/tube
Minimum	0.041	9.8	µg/tube
Maximum	53	22.5	µg/tube
Standard deviation	10.2	2.94	µg/tube
rel. Standard deviation	68.8	20.7	%
n	23	18	-

Graphical presentation of results
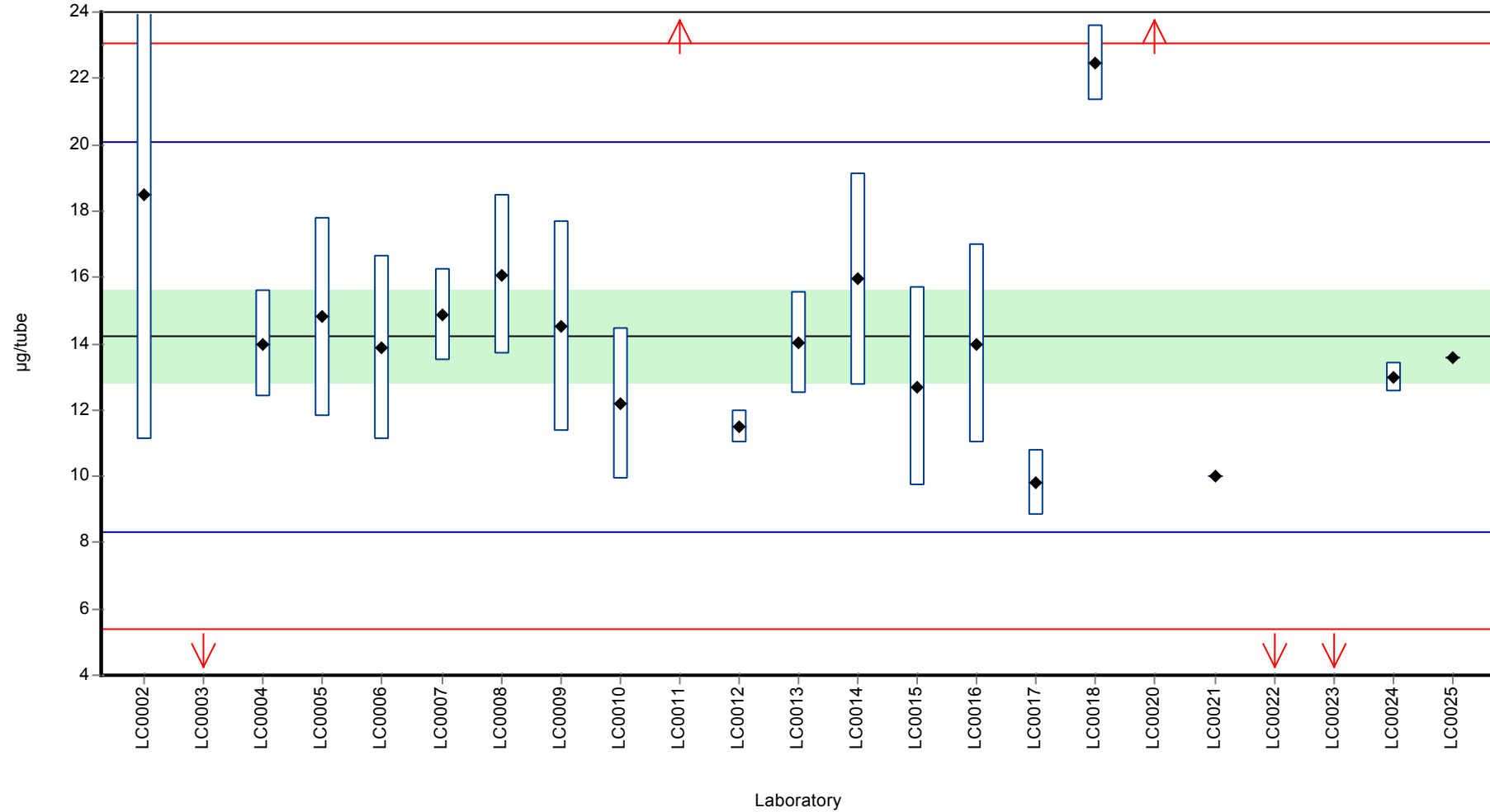
Results

Recovery rate
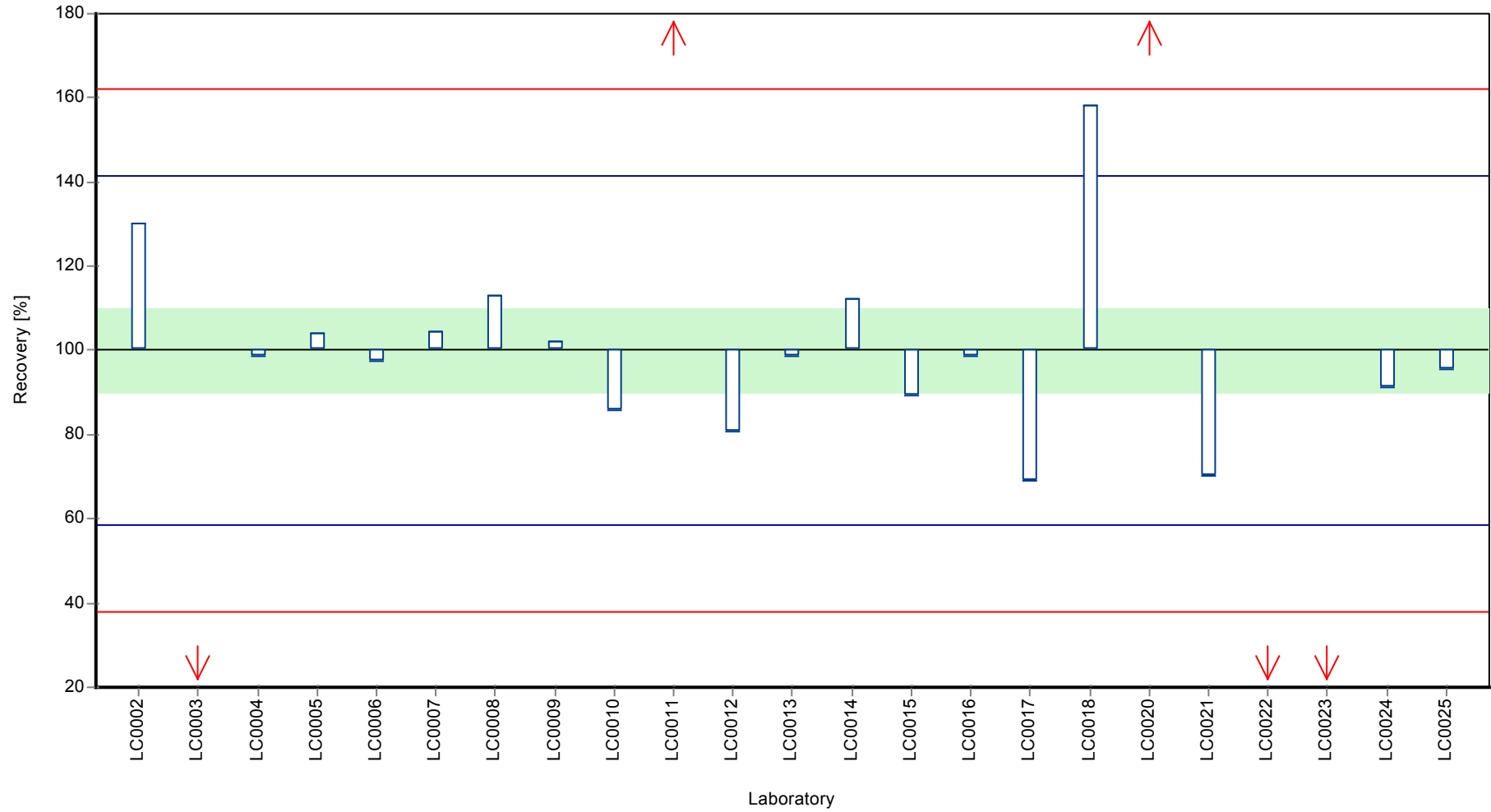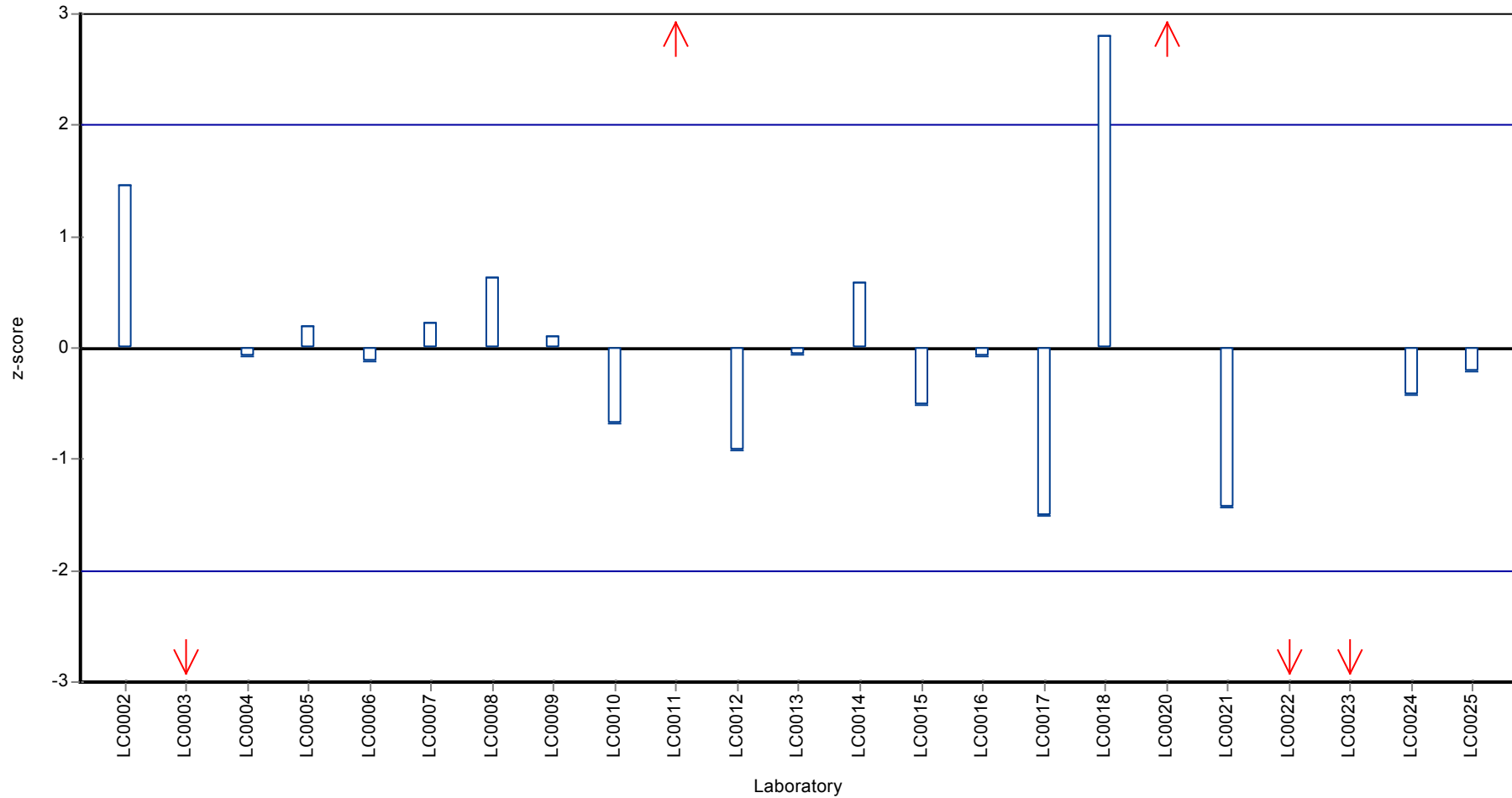
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

Toluene

Unit	µg/tube
Mean ± CI (99%)	6.95 ± 0.856
Minimum - Maximum	5.34 - 10.7
Control test value ± U	6.78 ± 0.279

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	7.9	3.2	114	0.78	
LC0003	1.29	0.26	18.6	-4.68	H
LC0004	6.7	0.71	96.4	-0.21	
LC0005	7.3	1.5	105	0.29	
LC0006	6.82	1.36	98.1	-0.11	
LC0007	6.94	1.26	99.9	-0.01	
LC0008	7.71	1.16	111	0.63	
LC0009	6.81	1.5	98	-0.12	
LC0010	5.8	0.79	83.4	-0.95	
LC0011	5.34	1.05	76.8	-1.33	
LC0012	15.6	1	224	7.14	H
LC0013	6.95	0.76	100	0	
LC0014	7.35	1.47	106	0.33	
LC0015	6.04	1.5	86.9	-0.75	
LC0016	6	2	86.3	-0.79	
LC0017	5.8	0.6	83.4	-0.95	
LC0018	10.72	0.465	154	3.11	
LC0020	13	2.6	187	5	H
LC0021	8.09	-	116	0.94	
LC0022	1.19	0.01	17.1	-4.76	H
LC0023	0.019	0.004	0.3	-5.72	H
LC0024	6.496	0.2	93.5	-0.38	
LC0025	6.34	1.05	91.2	-0.5	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.79 ± 2.1	6.95 ± 0.856	µg/tube
Minimum	0.019	5.34	µg/tube
Maximum	15.6	10.7	µg/tube
Standard deviation	3.36	1.21	µg/tube
rel. Standard deviation	49.5	17.4	%
n	23	18	-

Graphical presentation of results
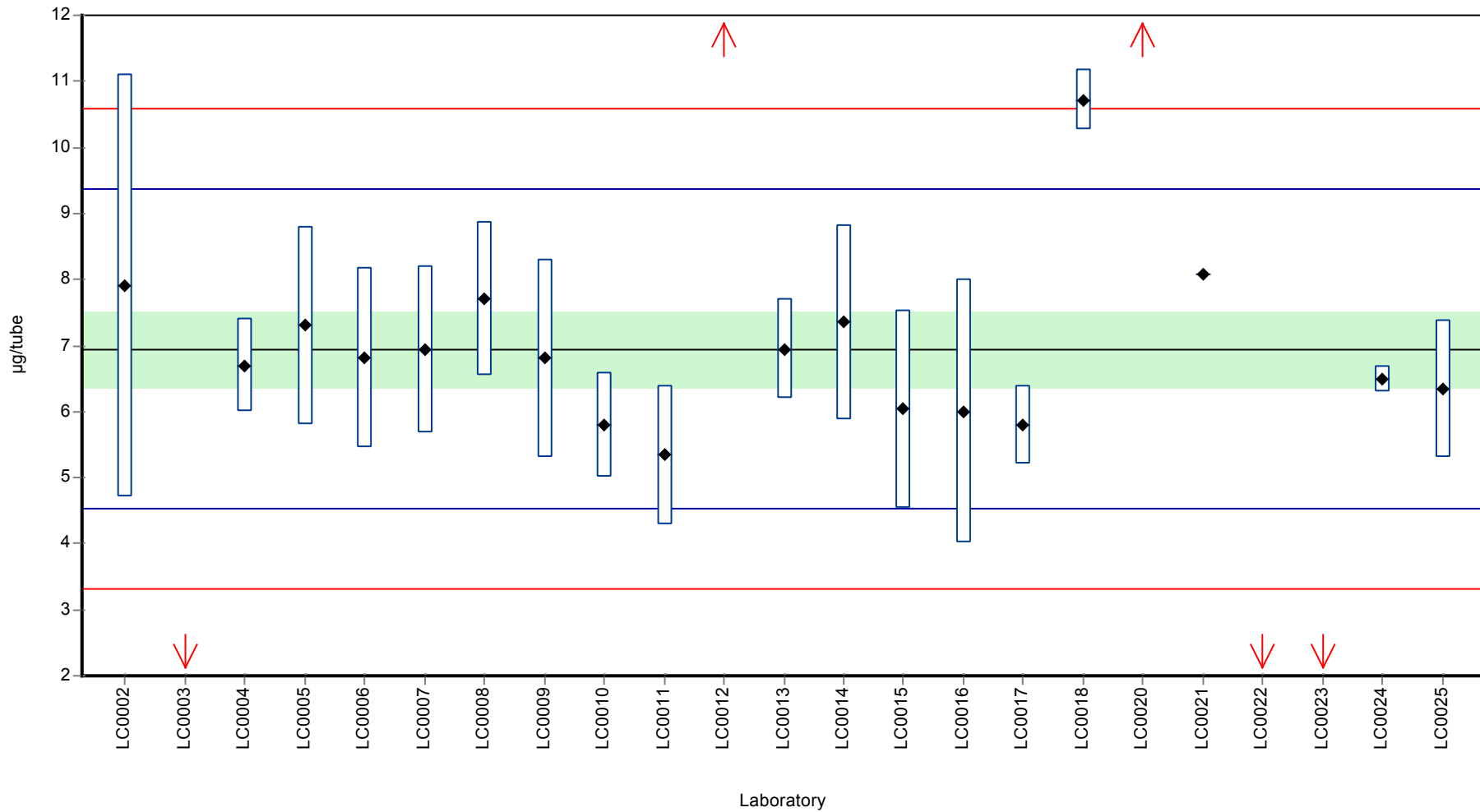
Results

Recovery rate
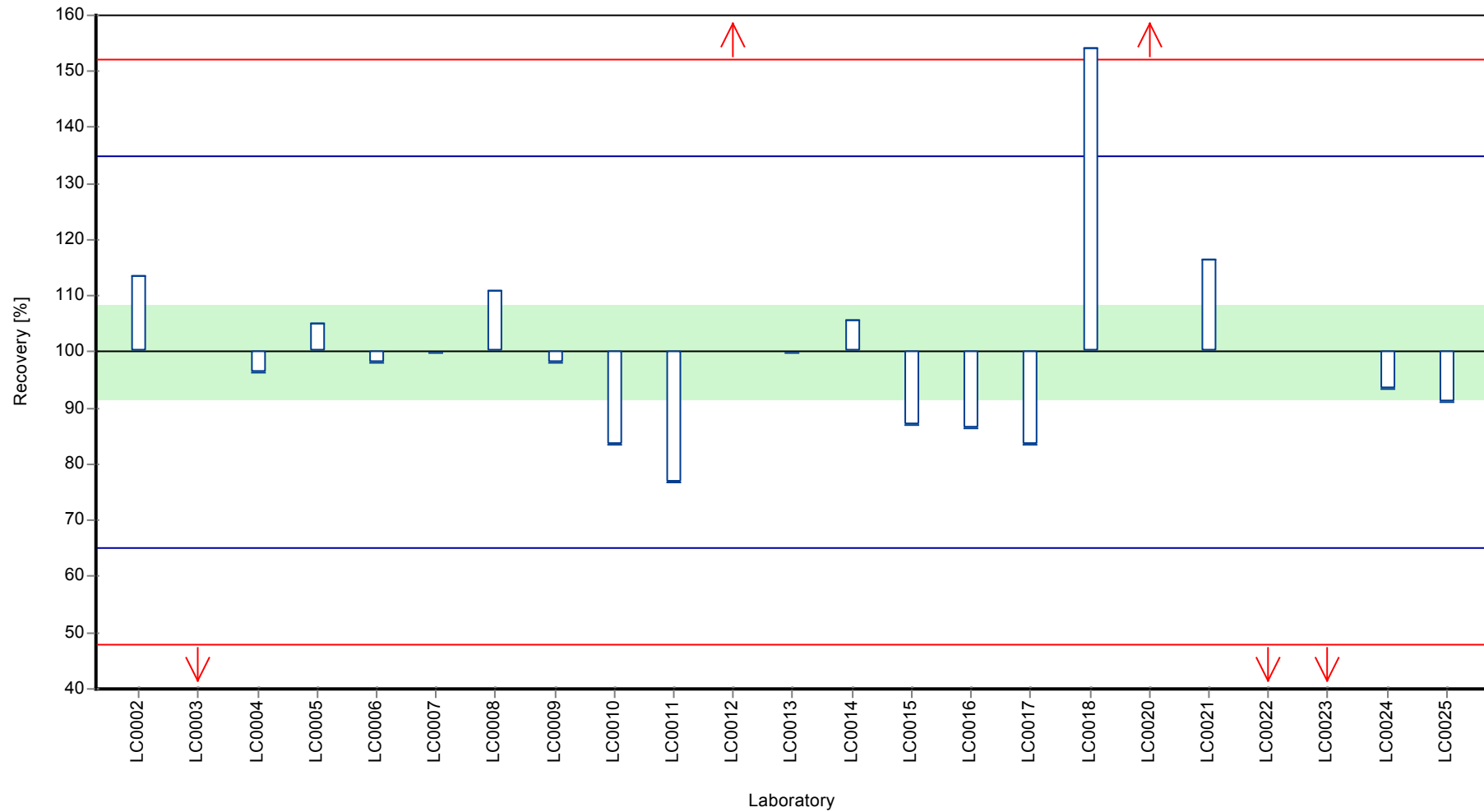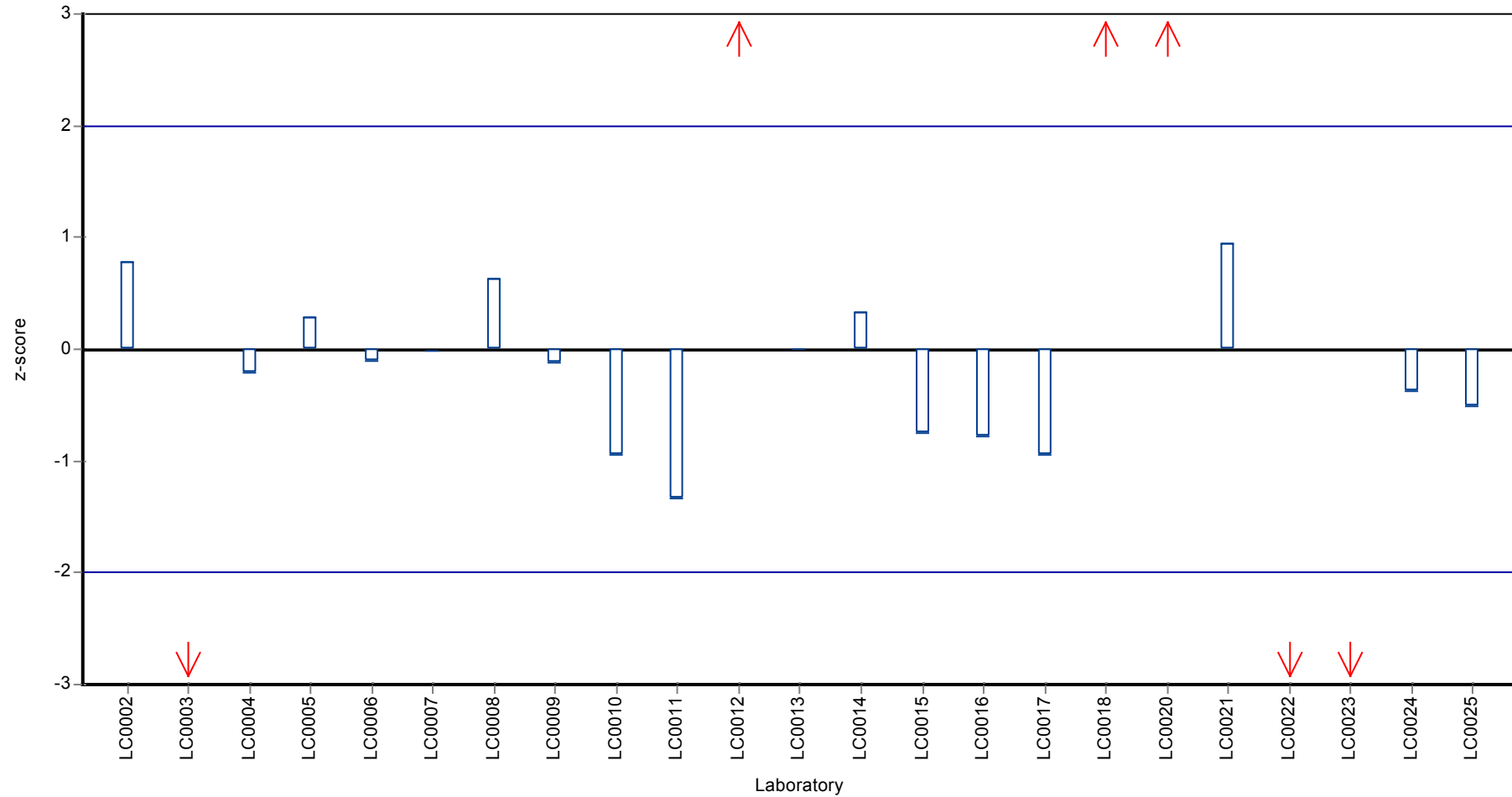
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

n-Decane

Unit	µg/tube
Mean ± CI (99%)	5.76 ± 1.18
Minimum - Maximum	3.98 - 8.1
Control test value ± U	7.44 ± 0.867

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	12	4.8	208	4.41	H
LC0003	-	-	-	-	
LC0004	5.6	0.84	97.2	-0.11	
LC0005	6.9	1.4	120	0.81	
LC0006	-	-	-	-	
LC0007	7.4	1.48	129	1.16	
LC0008	-	-	-	-	
LC0009	6.67	1.47	116	0.64	
LC0010	5.3	0.92	92	-0.32	
LC0011	-	-	-	-	
LC0012	4.03	0.2	70	-1.22	
LC0013	5.05	0.56	87.7	-0.5	
LC0014	8.1	1.62	141	1.65	
LC0015	6.41	1.5	111	0.46	
LC0016	-	-	-	-	
LC0017	-	-	-	-	
LC0018	-	-	-	-	
LC0020	7	1.4	122	0.88	
LC0021	3.98	-	69.1	-1.26	
LC0022	4.42	0.01	76.8	-0.94	
LC0023	-	-	-	-	
LC0024	-	-	-	-	
LC0025	4	-	69.5	-1.24	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.2 ± 1.73	5.76 ± 1.18	µg/tube
Minimum	3.98	3.98	µg/tube
Maximum	12	8.1	µg/tube
Standard deviation	2.15	1.42	µg/tube
rel. Standard deviation	34.7	24.6	%
n	14	13	-

Graphical presentation of results
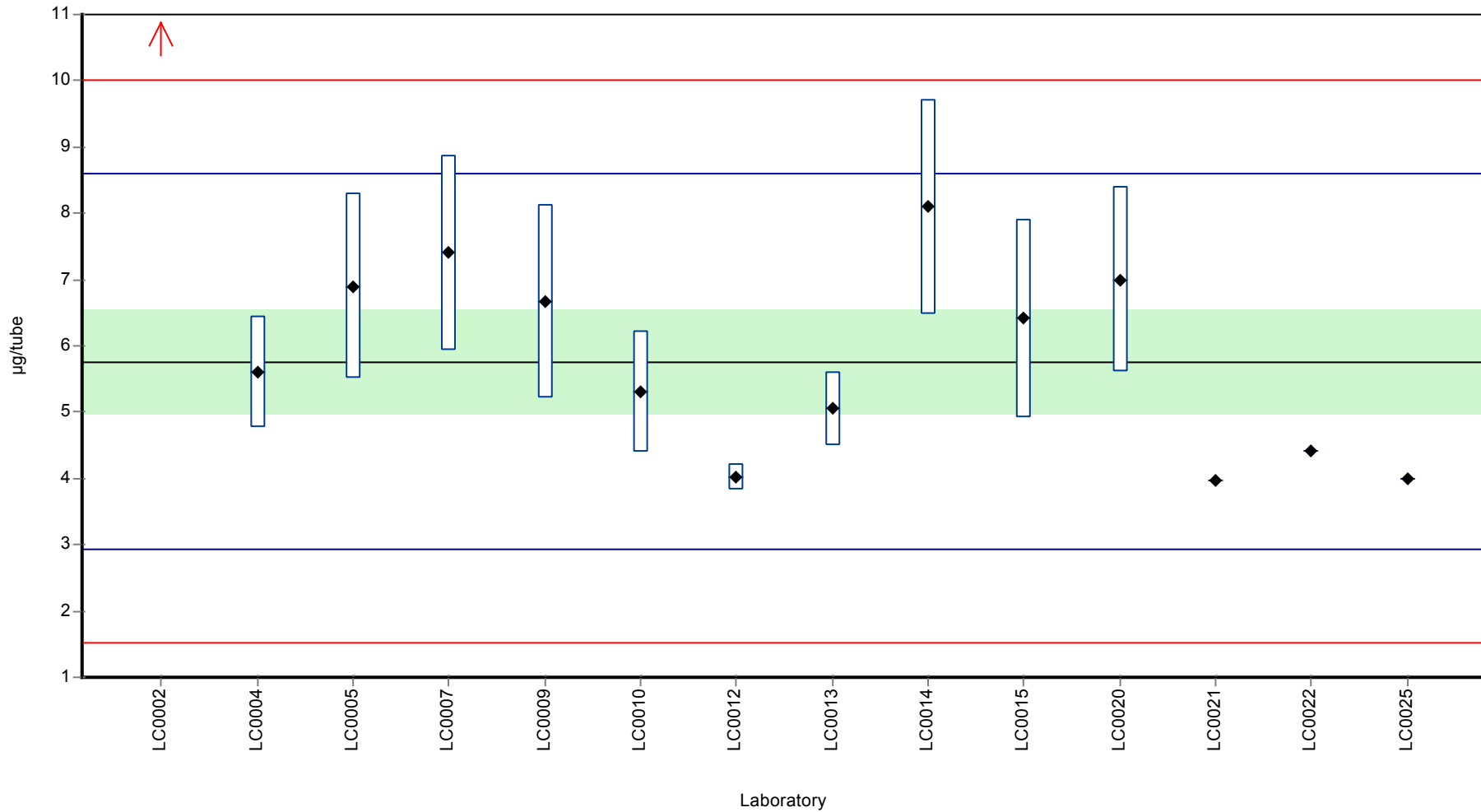
Results

Recovery rate
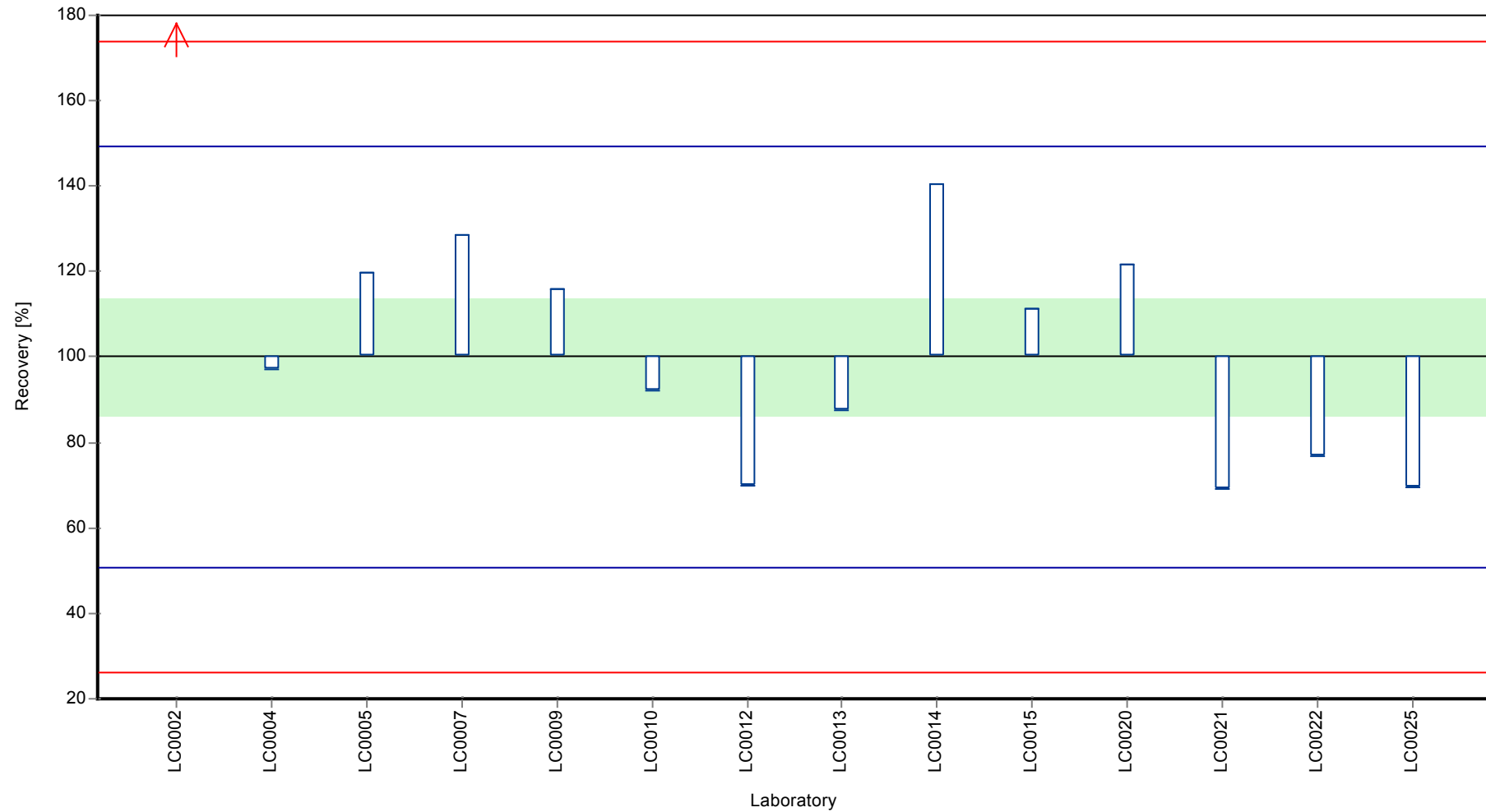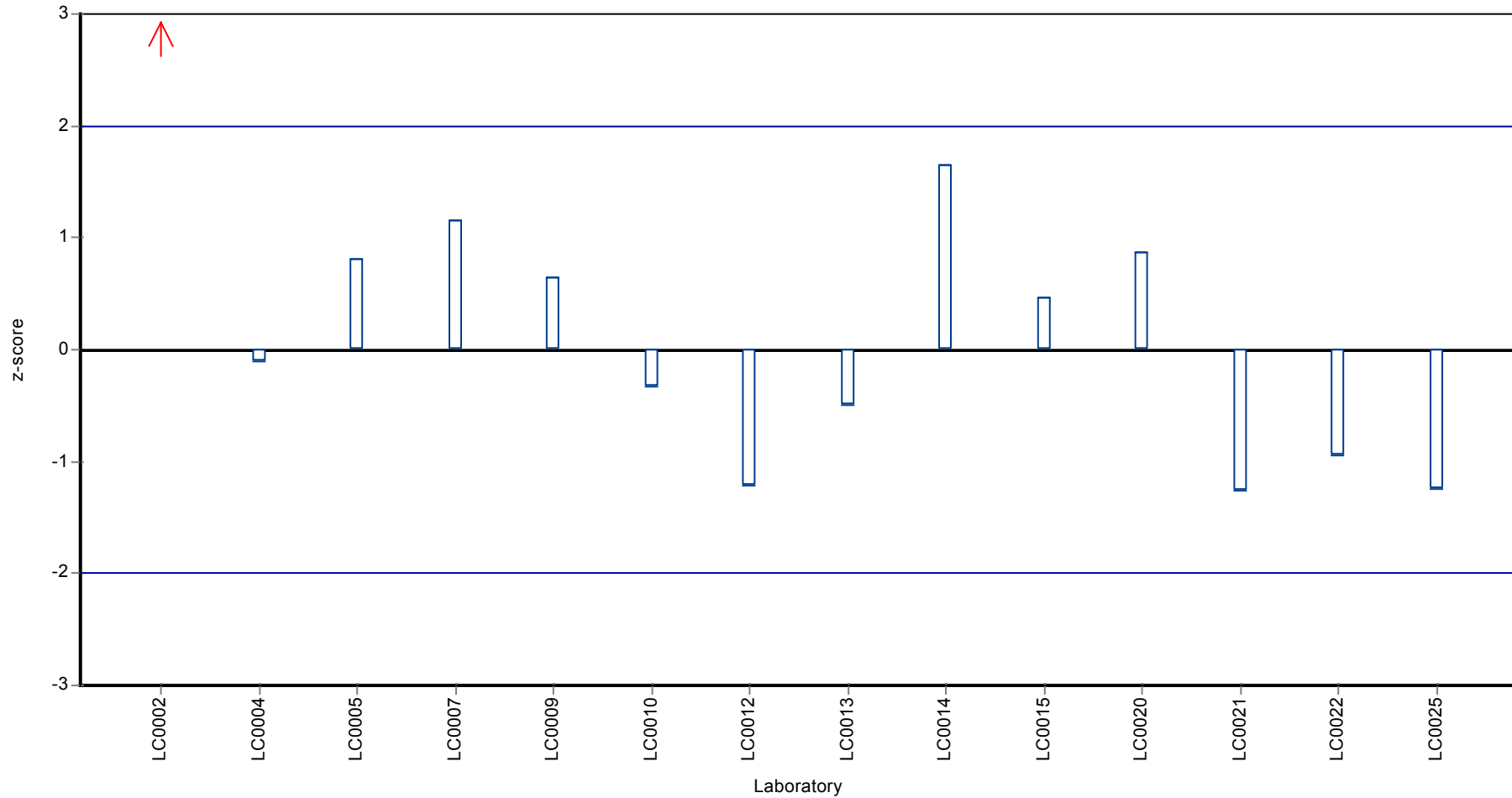
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

n-Heptane

Unit	µg/tube
Mean ± CI (99%)	8.76 ± 1.24
Minimum - Maximum	6.59 - 12.2
Control test value ± U	7.6 ± 0.162

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	12.2	4.9	139	2.14	
LC0003	-	-	-	-	
LC0004	6.6	1	75.4	-1.34	
LC0005	8.4	1.7	95.9	-0.22	
LC0006	-	-	-	-	
LC0007	10.2	2	116	0.9	
LC0008	-	-	-	-	
LC0009	8.46	1.86	96.6	-0.18	
LC0010	9.1	0.84	104	0.21	
LC0011	-	-	-	-	
LC0012	8.7	0.2	99.4	-0.03	
LC0013	6.59	0.72	75.3	-1.35	
LC0014	7.61	1.52	86.9	-0.71	
LC0015	11.5	3	131	1.71	
LC0016	-	-	-	-	
LC0017	-	-	-	-	
LC0018	-	-	-	-	
LC0020	8.4	1.7	95.9	-0.22	
LC0021	9.39	-	107	0.4	
LC0022	9.11	0.01	104	0.22	
LC0023	-	-	-	-	
LC0024	7.68	0.15	87.7	-0.67	
LC0025	7.4	-	84.5	-0.84	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	8.76 ± 1.24	8.76 ± 1.24	µg/tube
Minimum	6.59	6.59	µg/tube
Maximum	12.2	12.2	µg/tube
Standard deviation	1.61	1.61	µg/tube
rel. Standard deviation	18.3	18.3	%
n	15	15	-

Graphical presentation of results
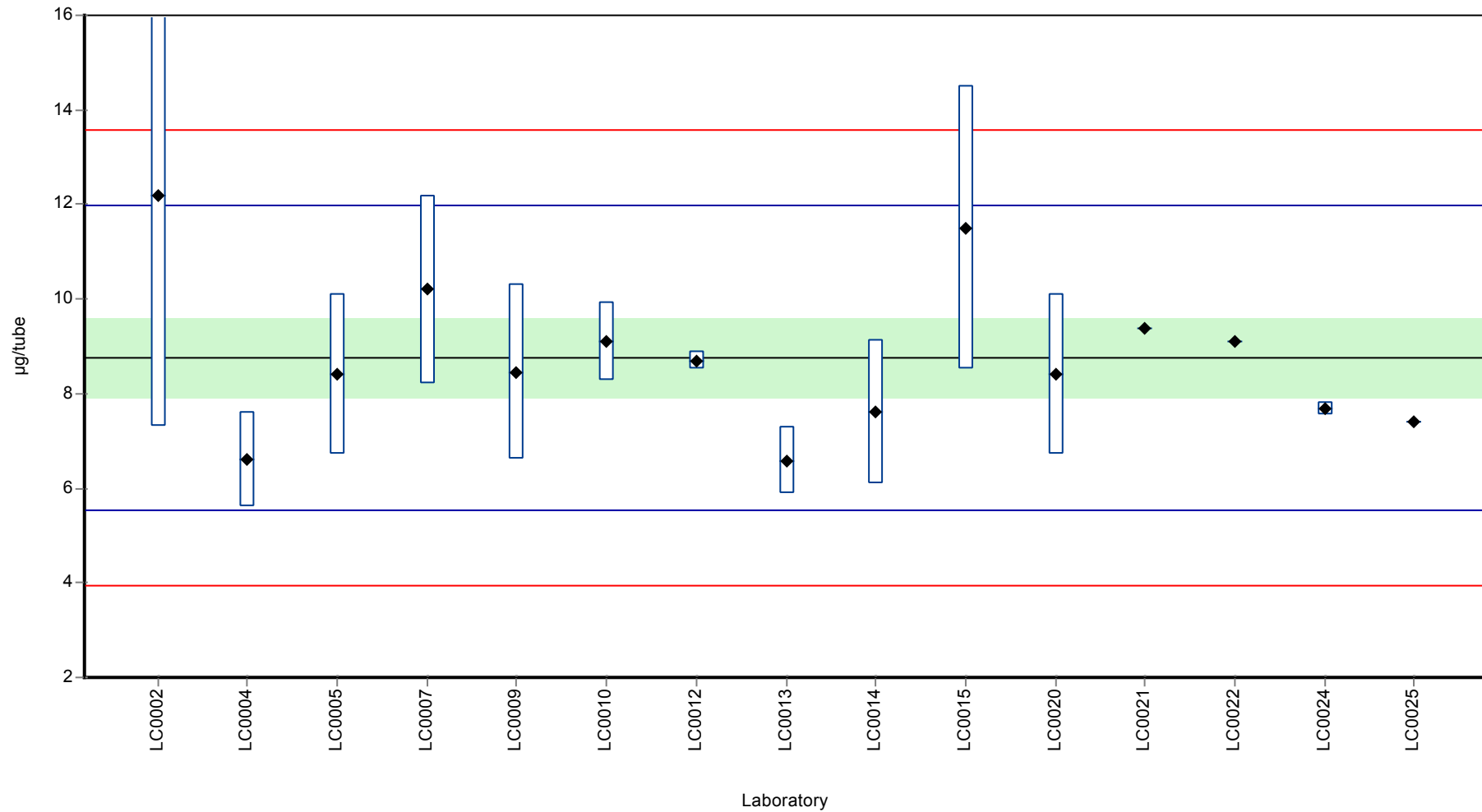
Results

Recovery rate
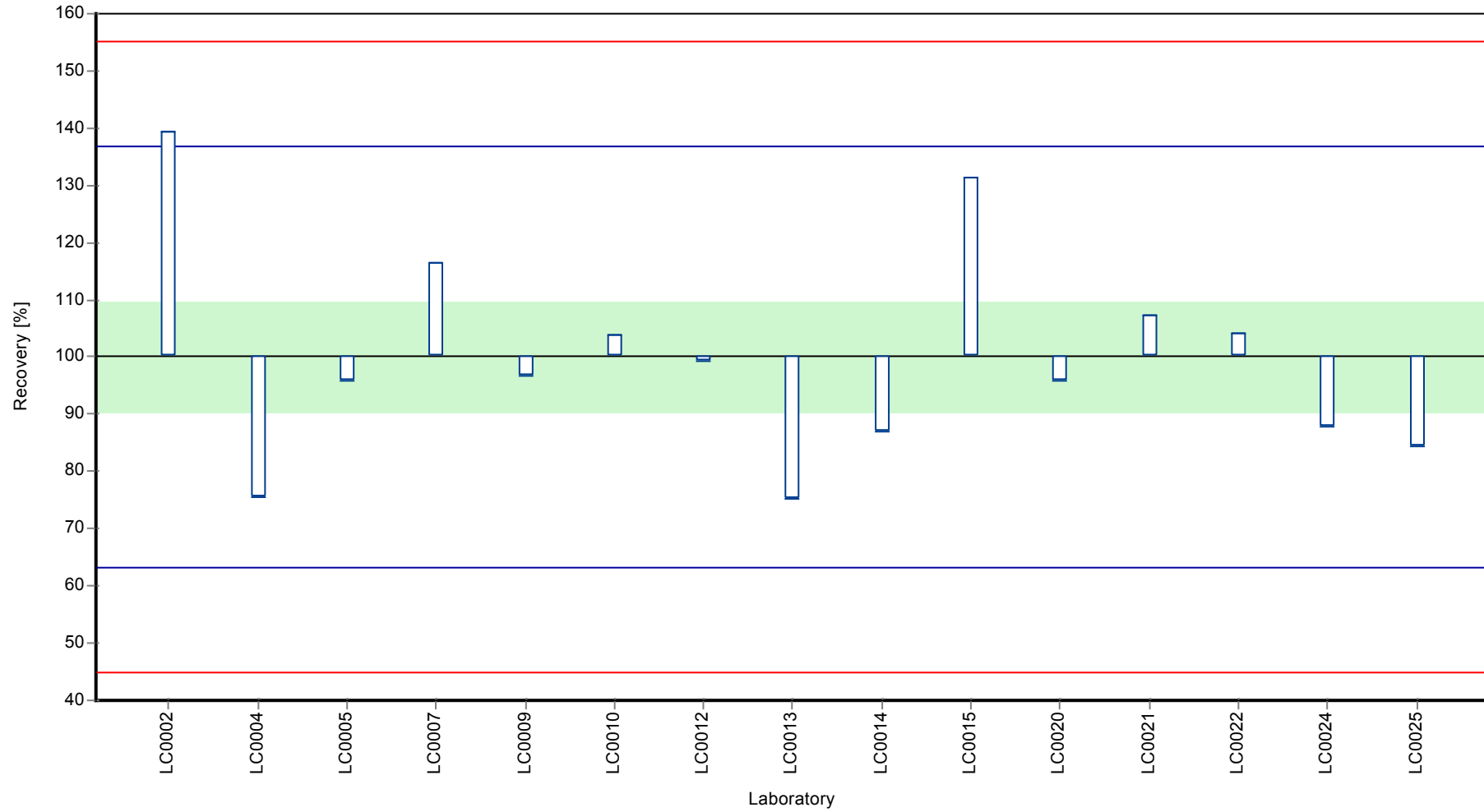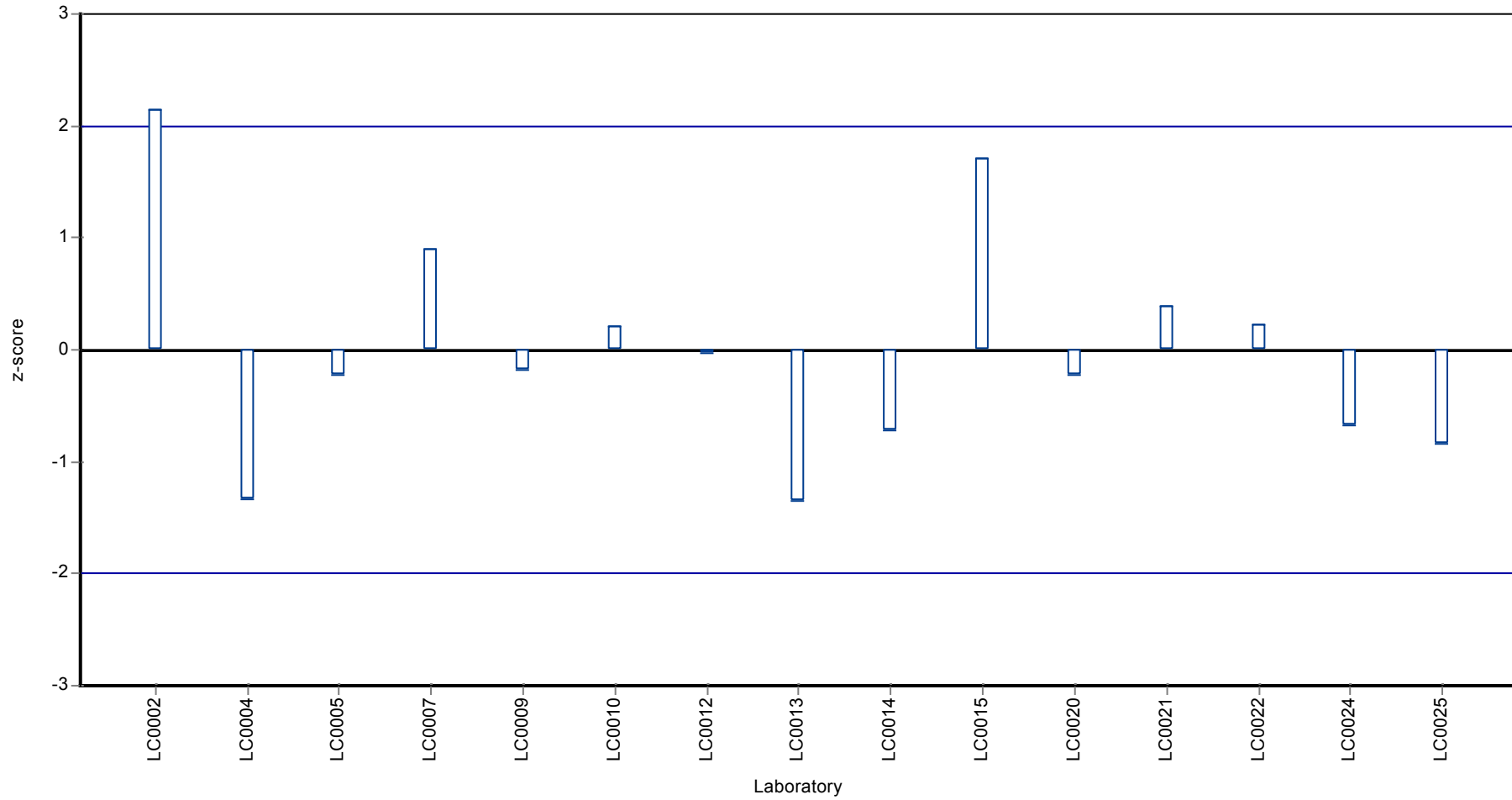
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

n-Hexane

Unit	µg/tube
Mean ± CI (99%)	7.54 ± 1.27
Minimum - Maximum	5.2 - 9.96
Control test value ± U	6.86 ± 0.166

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	7.4	3	98.2	-0.1	
LC0003	-	-	-	-	
LC0004	6.3	0.95	83.6	-0.88	
LC0005	7.9	1.6	105	0.26	
LC0006	-	-	-	-	
LC0007	9.96	2	132	1.72	
LC0008	-	-	-	-	
LC0009	8.4	1.68	111	0.61	
LC0010	8.9	1.26	118	0.97	
LC0011	-	-	-	-	
LC0012	8.67	0.2	115	0.8	
LC0013	5.98	0.66	79.3	-1.11	
LC0014	6.9	1.38	91.5	-0.45	
LC0015	18.1	4	240	7.51	H
LC0016	-	-	-	-	
LC0017	-	-	-	-	
LC0018	-	-	-	-	
LC0020	< 1 (LOQ)	-	-	-	FN
LC0021	21.5	-	285	9.93	H
LC0022	15.67	0.01	208	5.78	H
LC0023	-	-	-	-	
LC0024	7.32	0.14	97.1	-0.16	
LC0025	5.2	-	69	-1.66	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	9.87 ± 3.95	7.54 ± 1.27	µg/tube
Minimum	5.2	5.2	µg/tube
Maximum	21.5	9.96	µg/tube
Standard deviation	4.93	1.41	µg/tube
rel. Standard deviation	50	18.7	%
n	14	11	-

Graphical presentation of results

Results

Laboratory
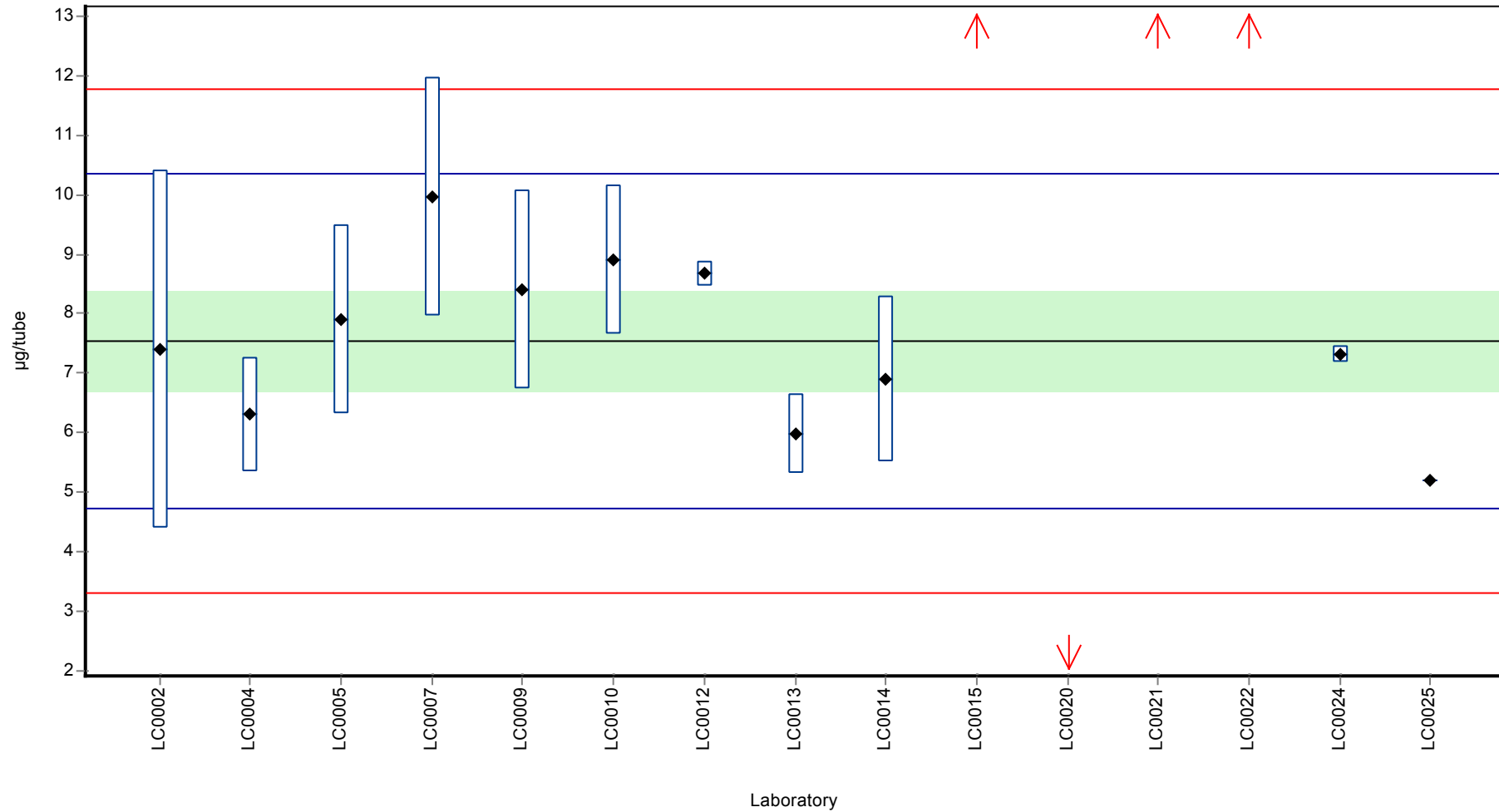
Recovery rate
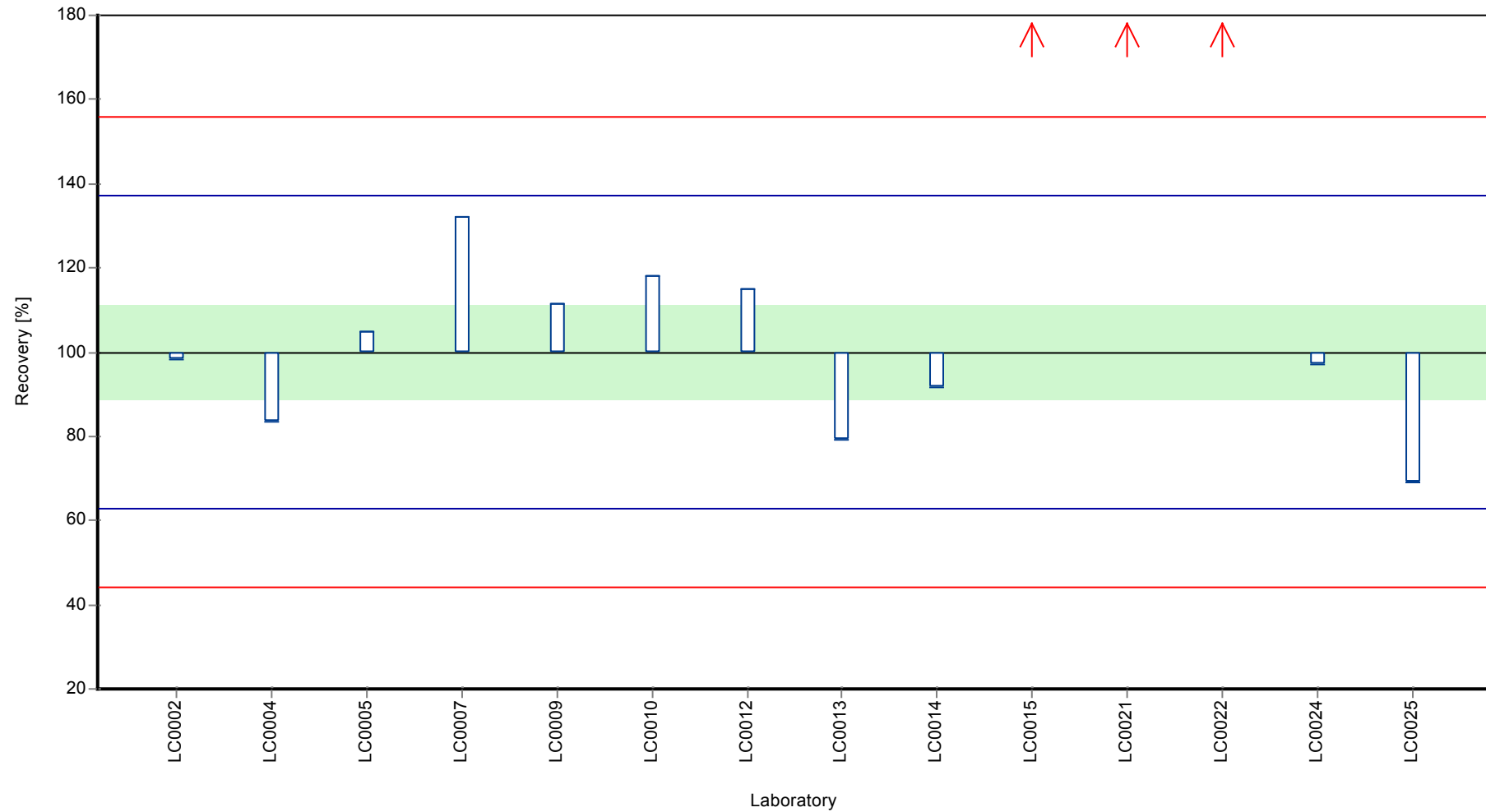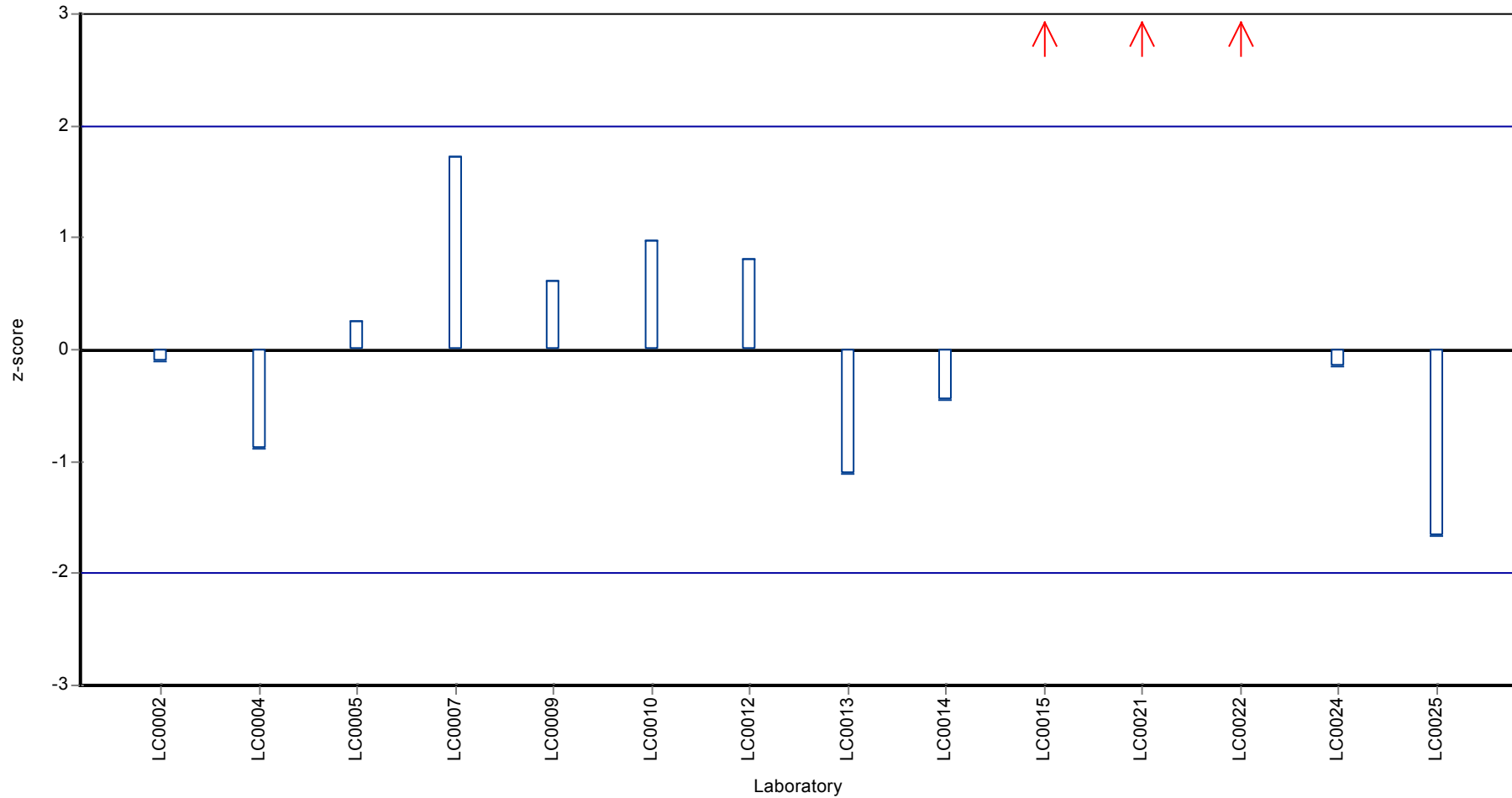
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

n-Nonane

Unit	µg/tube
Mean ± CI (99%)	7.7 ± 1.65
Minimum - Maximum	5.08 - 13.1
Control test value ± U	8.62 ± 0.478

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	13.1	5.2	170	2.53	
LC0003	-	-	-	-	
LC0004	6.6	0.99	85.7	-0.52	
LC0005	7.9	1.6	103	0.09	
LC0006	-	-	-	-	
LC0007	10.5	2.1	136	1.31	
LC0008	-	-	-	-	
LC0009	8.04	1.77	104	0.16	
LC0010	7.1	1.35	92.2	-0.28	
LC0011	-	-	-	-	
LC0012	7.67	0.2	99.6	-0.01	
LC0013	6	0.66	77.9	-0.8	
LC0014	9.84	1.97	128	1	
LC0015	7.76	2	101	0.03	
LC0016	-	-	-	-	
LC0017	-	-	-	-	
LC0018	-	-	-	-	
LC0020	8.3	1.7	108	0.28	
LC0021	5.5	-	71.4	-1.03	
LC0022	5.08	0.01	66	-1.23	
LC0023	-	-	-	-	
LC0024	6.34	0.029	82.3	-0.64	
LC0025	5.8	-	75.3	-0.89	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	7.7 ± 1.65	7.7 ± 1.65	µg/tube
Minimum	5.08	5.08	µg/tube
Maximum	13.1	13.1	µg/tube
Standard deviation	2.13	2.13	µg/tube
rel. Standard deviation	27.7	27.7	%
n	15	15	-

Graphical presentation of results

Results

Laboratory
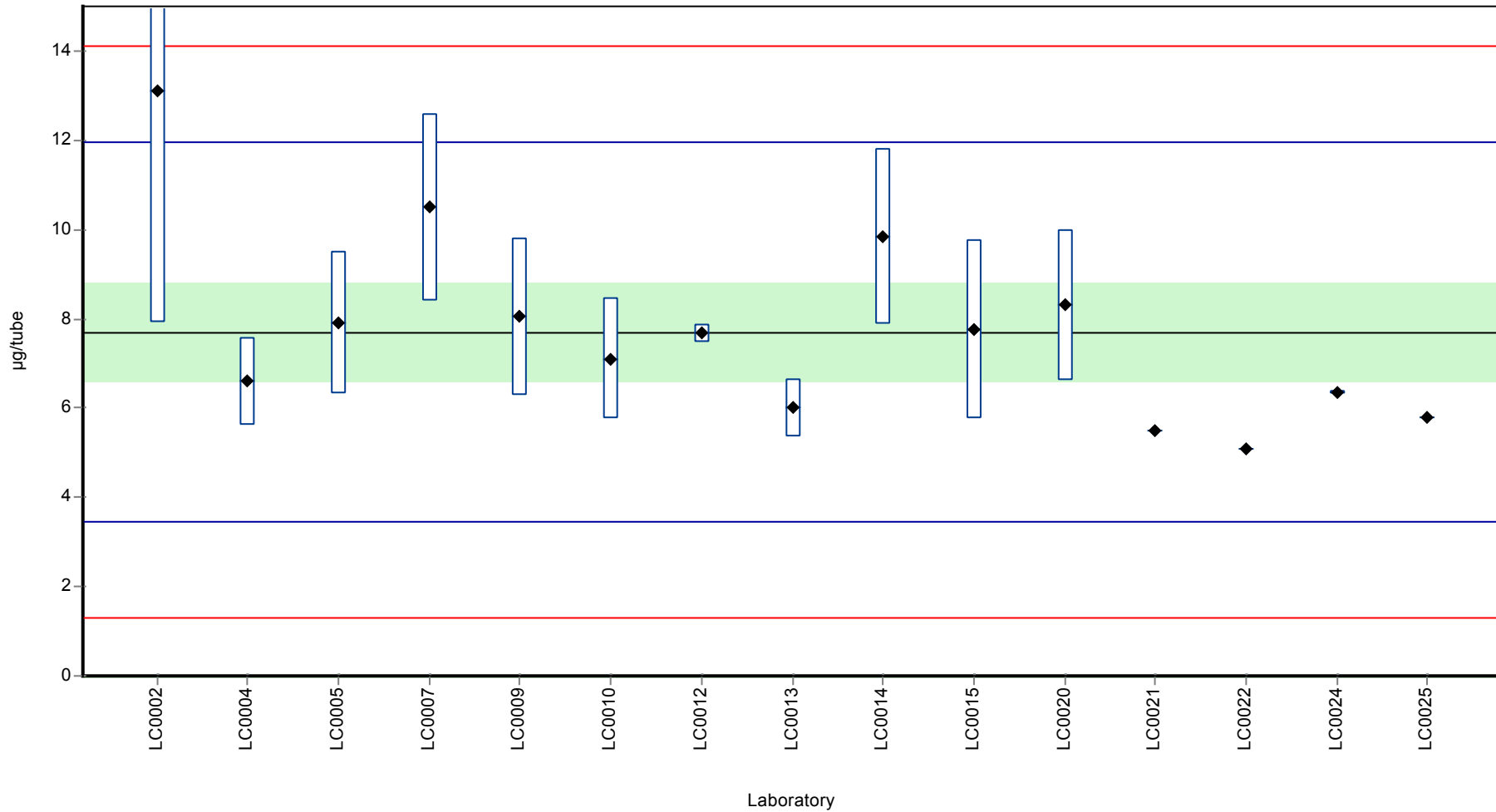
Recovery rate
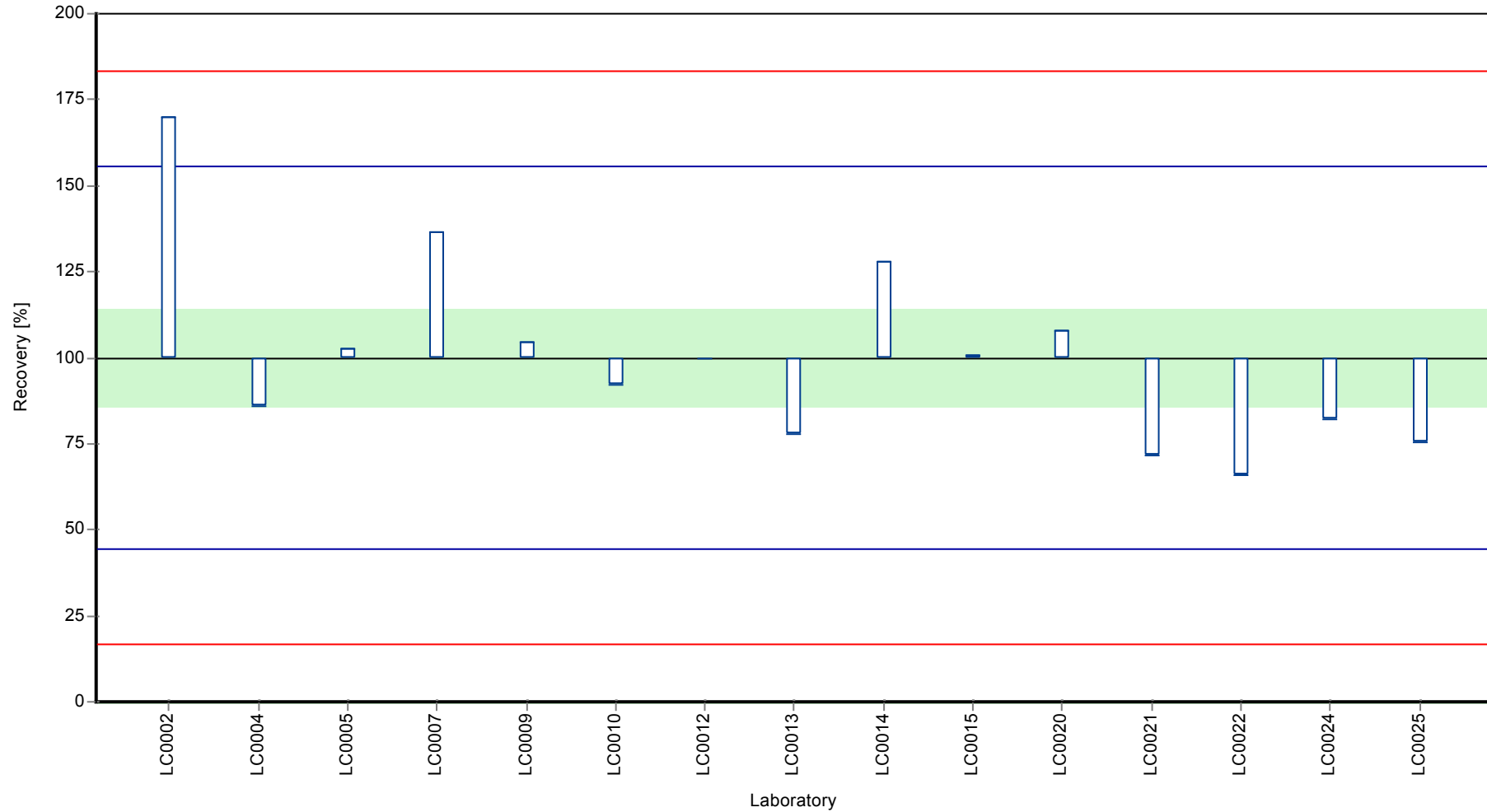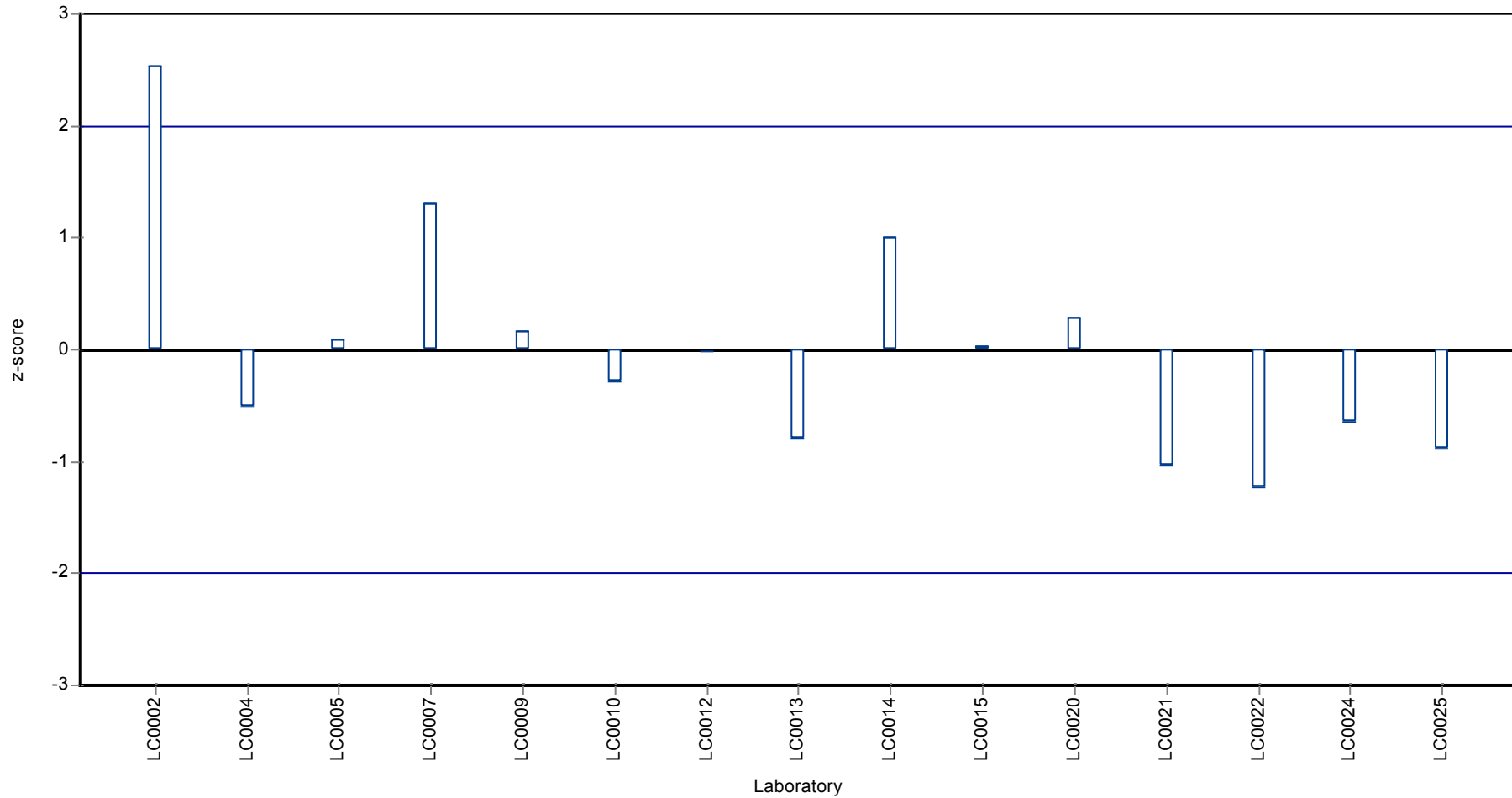
Z-score

Parameter oriented report

BL05 - BTEX & C5-C10

n-Octane

Unit	µg/tube
Mean ± CI (99%)	8.23 ± 1.3
Minimum - Maximum	5.93 - 12.7
Control test value ± U	8.57 ± 0.352

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	12.7	5.1	154	2.67	
LC0003	-	-	-	-	
LC0004	6.8	1	82.7	-0.85	
LC0005	8.7	1.3	106	0.28	
LC0006	-	-	-	-	
LC0007	10.2	2	124	1.18	
LC0008	-	-	-	-	
LC0009	8.49	1.86	103	0.16	
LC0010	8	1.27	97.2	-0.14	
LC0011	-	-	-	-	
LC0012	8.25	0.2	100	0.01	
LC0013	6.61	0.73	80.3	-0.97	
LC0014	8.44	1.86	103	0.13	
LC0015	9.26	2	113	0.62	
LC0016	-	-	-	-	
LC0017	-	-	-	-	
LC0018	-	-	-	-	
LC0020	8.6	1.7	105	0.22	
LC0021	6.72	-	81.7	-0.9	
LC0022	5.93	0.01	72.1	-1.37	
LC0023	-	-	-	-	
LC0024	7.51	0.067	91.3	-0.43	
LC0025	7.2	-	87.5	-0.61	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	8.23 ± 1.3	8.23 ± 1.3	µg/tube
Minimum	5.93	5.93	µg/tube
Maximum	12.7	12.7	µg/tube
Standard deviation	1.67	1.67	µg/tube
rel. Standard deviation	20.4	20.4	%
n	15	15	-

Graphical presentation of results
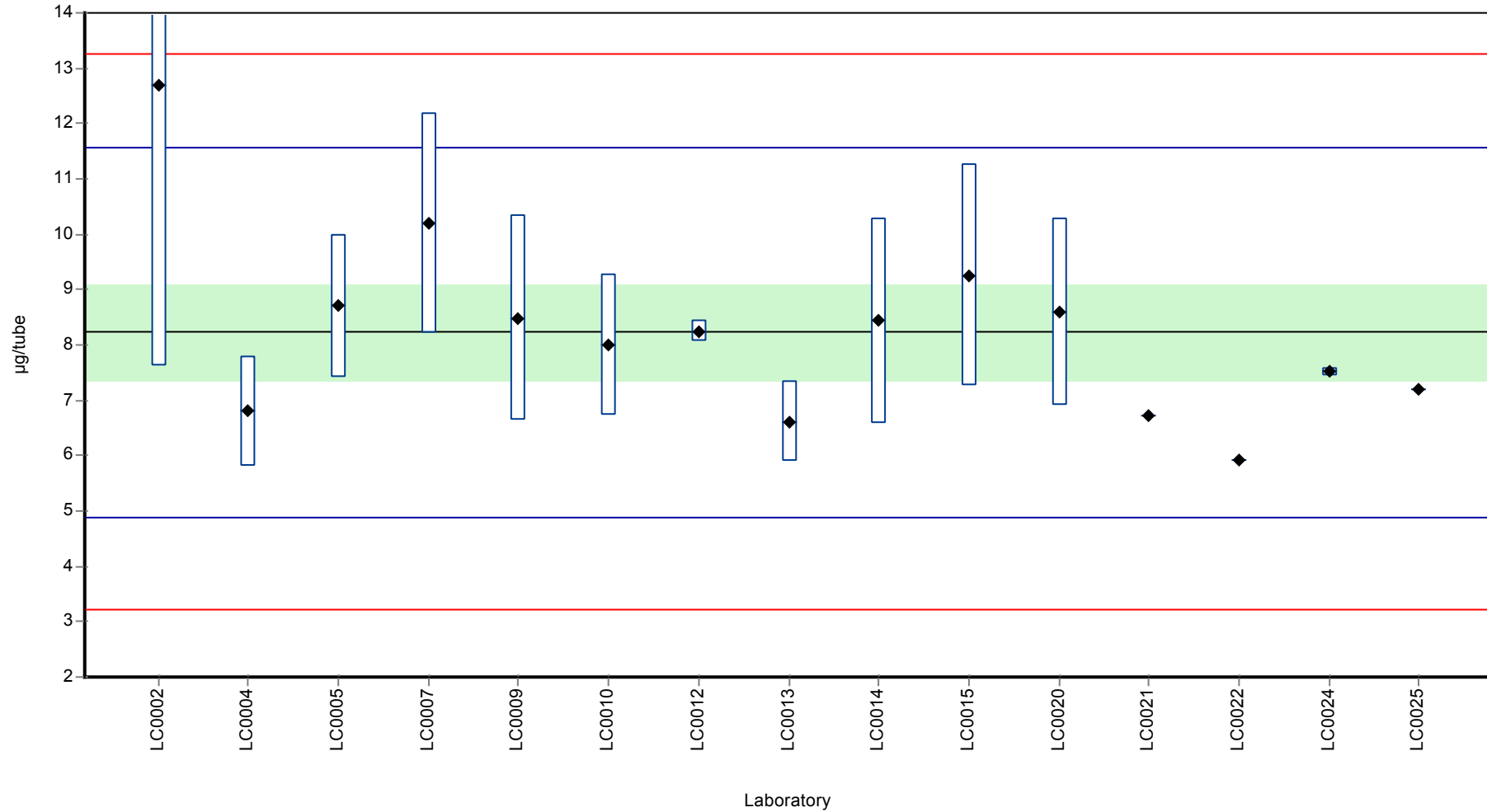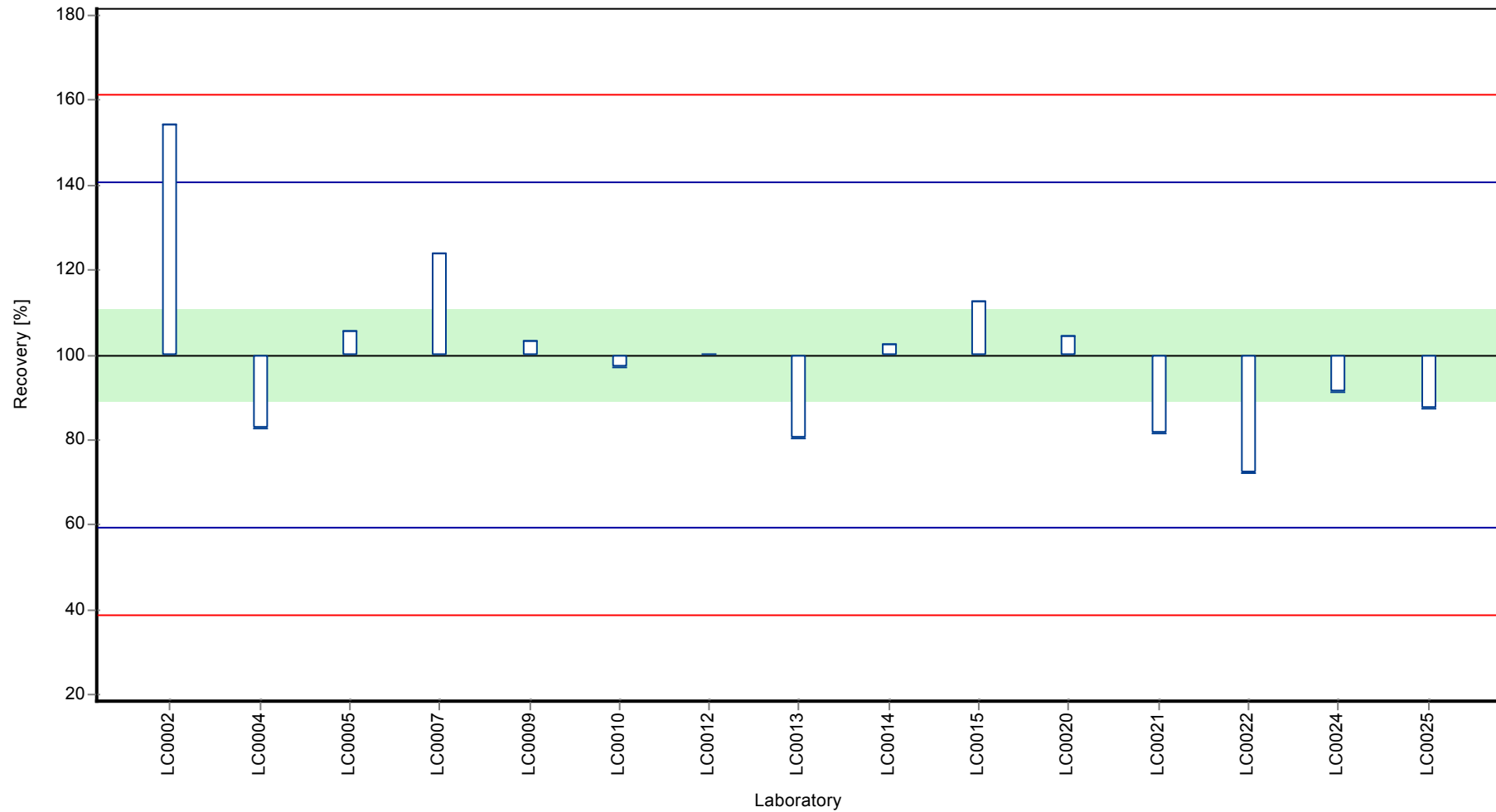
Results

Recovery rate

Z-score

Parameter oriented report

54
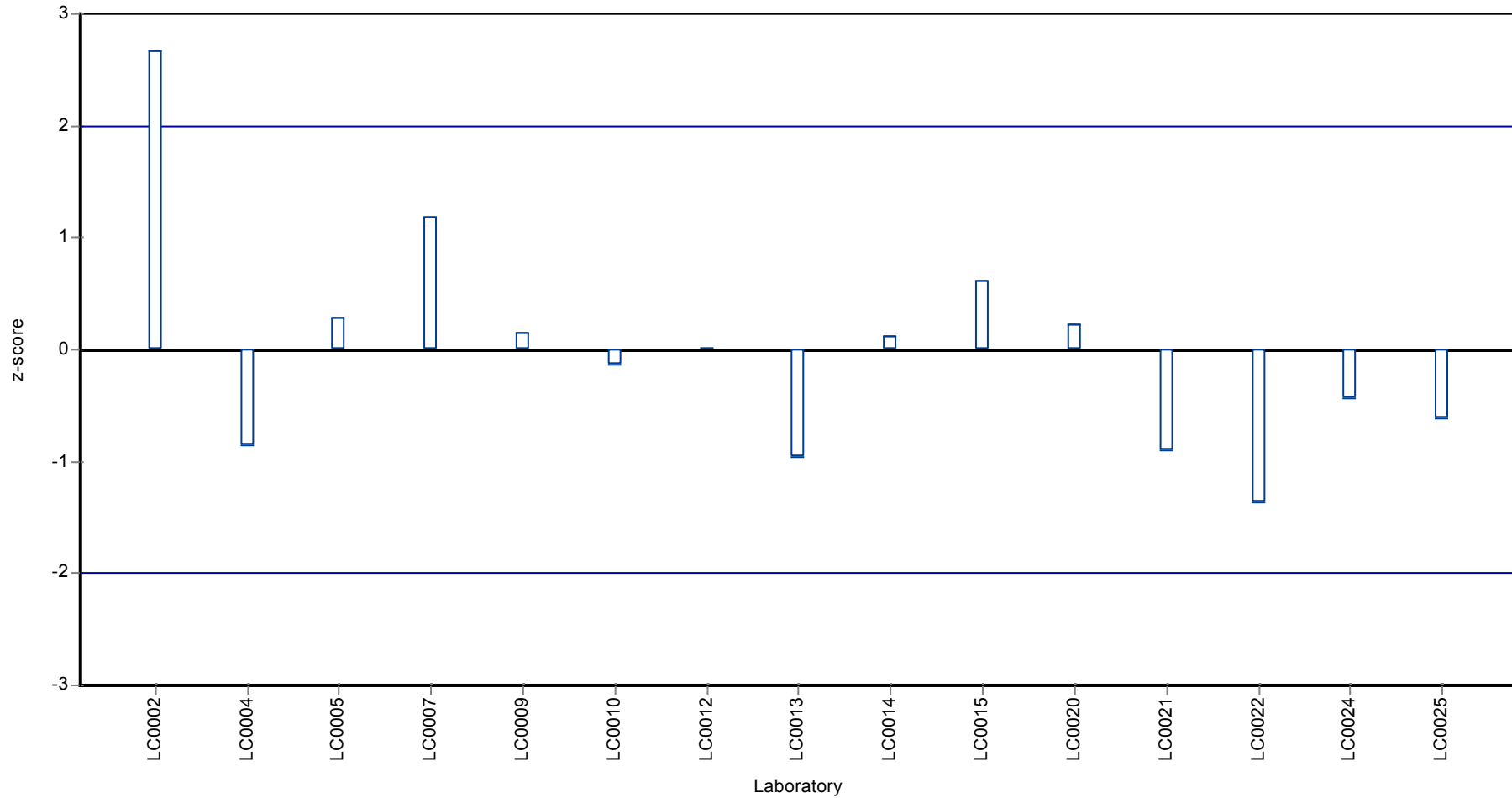
BL05 - BTEX & C5-C10

n-Pentane

Unit	µg/tube
Mean ± CI (99%)	8.54 ± 2.54
Minimum - Maximum	2.72 - 13
Control test value ± U	6.03 ± 0.331

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0002	12.6	5	148	1.28	
LC0003	-	-	-	-	
LC0004	5.7	0.85	66.8	-0.9	
LC0005	6.9	1.4	80.8	-0.52	
LC0006	-	-	-	-	
LC0007	11.6	2.3	136	0.97	
LC0008	-	-	-	-	
LC0009	9.6	2.11	112	0.34	
LC0010	8.2	1.34	96	-0.11	
LC0011	-	-	-	-	
LC0012	8.67	0.2	102	0.04	
LC0013	4.6	0.51	53.9	-1.24	
LC0014	6.7	1.34	78.5	-0.58	
LC0015	-	-	-	-	
LC0016	-	-	-	-	
LC0017	-	-	-	-	
LC0018	-	-	-	-	
LC0020	12	2.4	141	1.09	
LC0021	13	-	152	1.41	
LC0022	2.72	0.01	31.9	-1.84	
LC0023	-	-	-	-	
LC0024	6.65	0.22	77.9	-0.6	
LC0025	10.6	-	124	0.65	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	8.54 ± 2.54	8.54 ± 2.54	µg/tube
Minimum	2.72	2.72	µg/tube
Maximum	13	13	µg/tube
Standard deviation	3.17	3.17	µg/tube
rel. Standard deviation	37.1	37.1	%
n	14	14	-

Graphical presentation of results
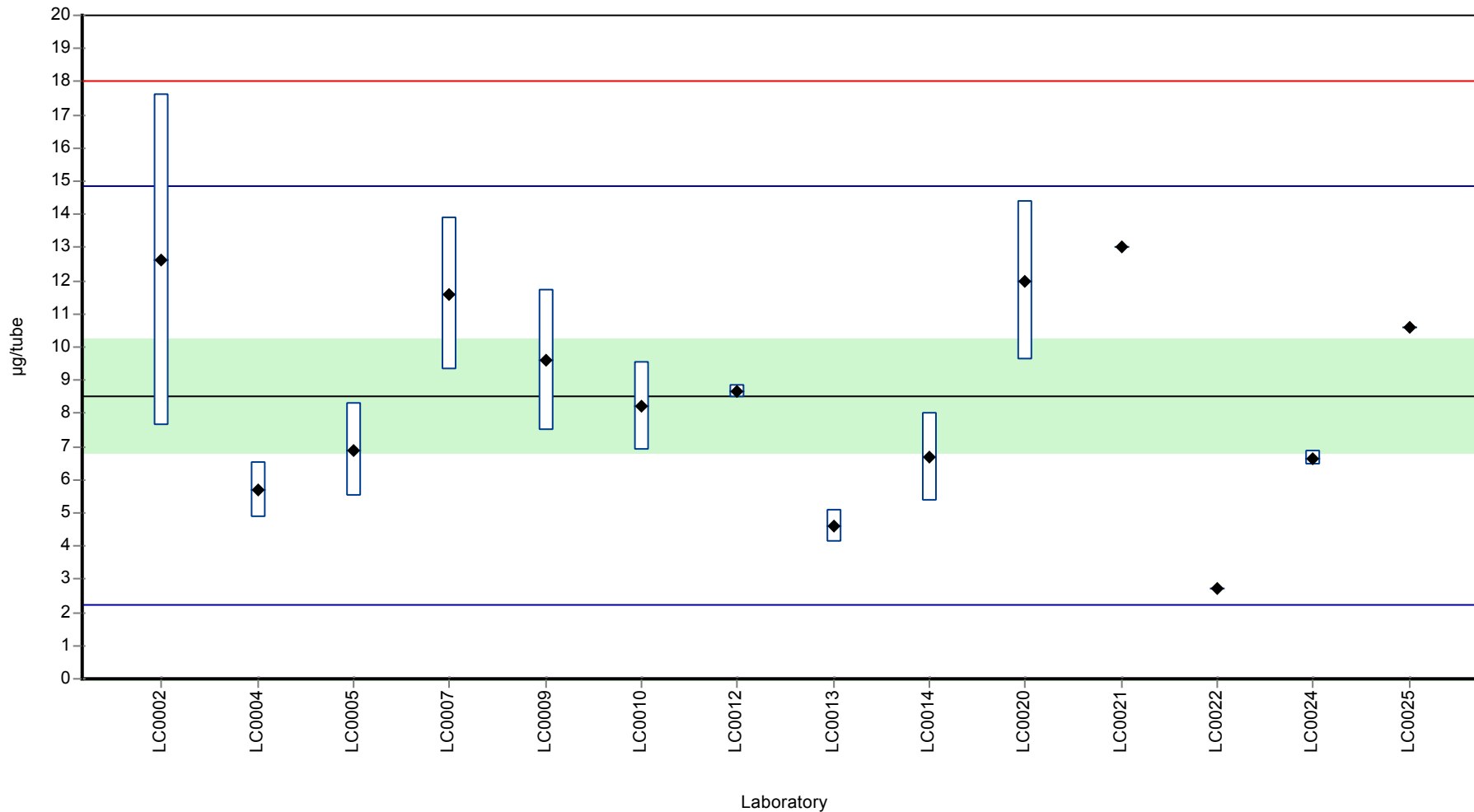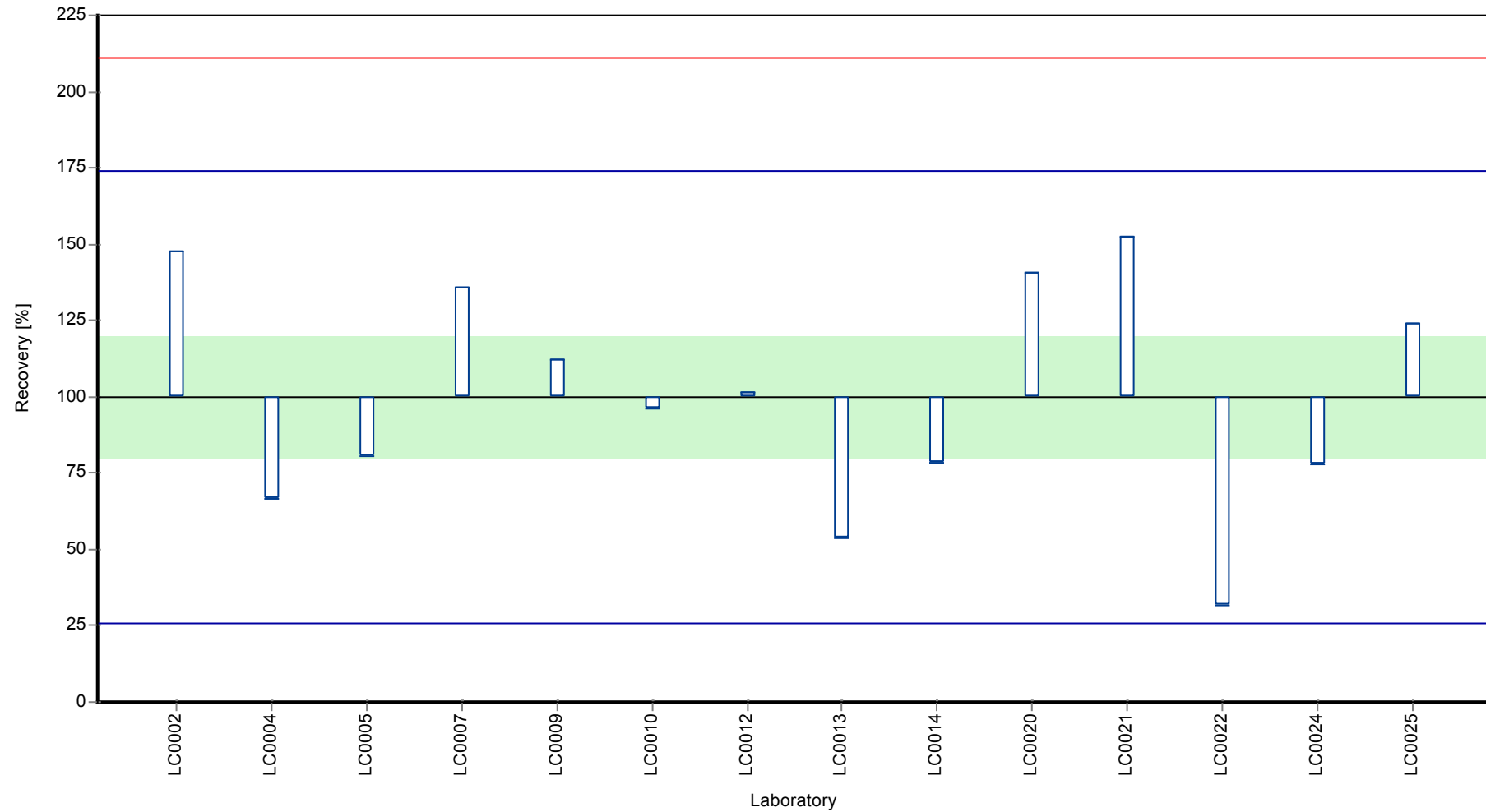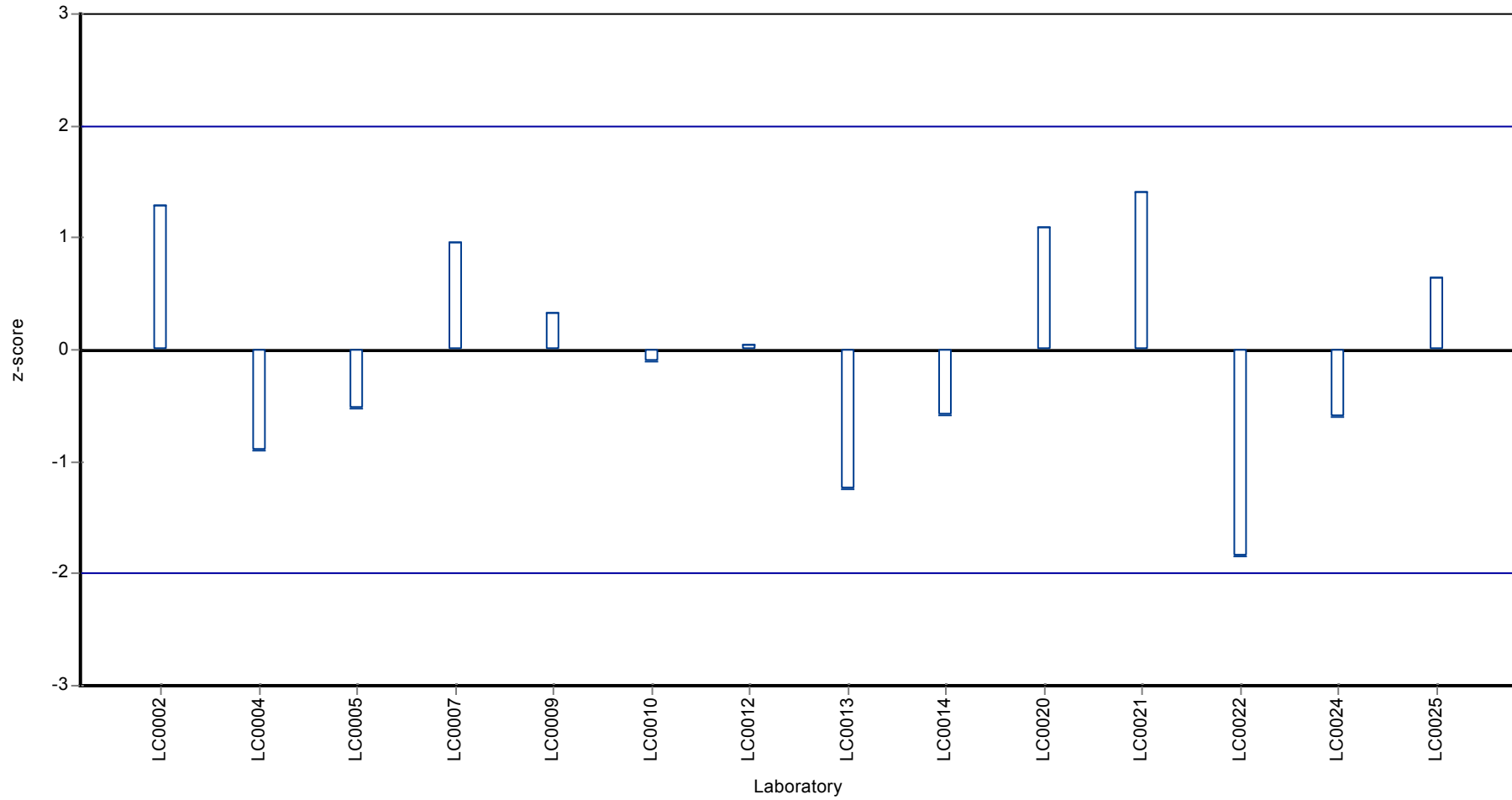
Results

Recovery rate

Z-score

Parameter oriented report

CL04 - CHC

1,1,1-Trichloroethane

Unit	µg/tube
Mean ± CI (99%)	7.58 ± 0.377
Minimum - Maximum	6.3 - 8.4
Control test value ± U	7.34 ± 0.435

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	8.4	-	111	1.69	
LC0002	10	4	132	4.98	H
LC0004	7.2	1.1	95	-0.78	
LC0006	7.91	1.58	104	0.69	
LC0007	7.47	1.2	98.6	-0.22	
LC0009	7.59	1.67	100	0.03	
LC0010	9.3	3.3	123	3.54	H
LC0011	7.03	1.4	92.8	-1.13	
LC0013	7.75	0.85	102	0.35	
LC0014	7.7	1.54	102	0.25	
LC0015	8.02	2	106	0.91	
LC0016	7.7	2	102	0.25	
LC0017	6.3	0.6	83.1	-2.63	
LC0018	7.363	0.867	97.2	-0.44	
LC0019	7.57	-	99.9	-0.01	
LC0020	14	2.8	185	13.2	H
LC0022	2.86	0.01	37.7	-9.7	H
LC0023	0.024	0.006	0.3	-15.5	H
LC0024	7.895	0.14	104	0.65	
LC0025	7.76	-	102	0.38	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	7.49 ± 1.77	7.58 ± 0.377	µg/tube
Minimum	0.024	6.3	µg/tube
Maximum	14	8.4	µg/tube
Standard deviation	2.64	0.486	µg/tube
rel. Standard deviation	35.3	6.42	%
n	20	15	-
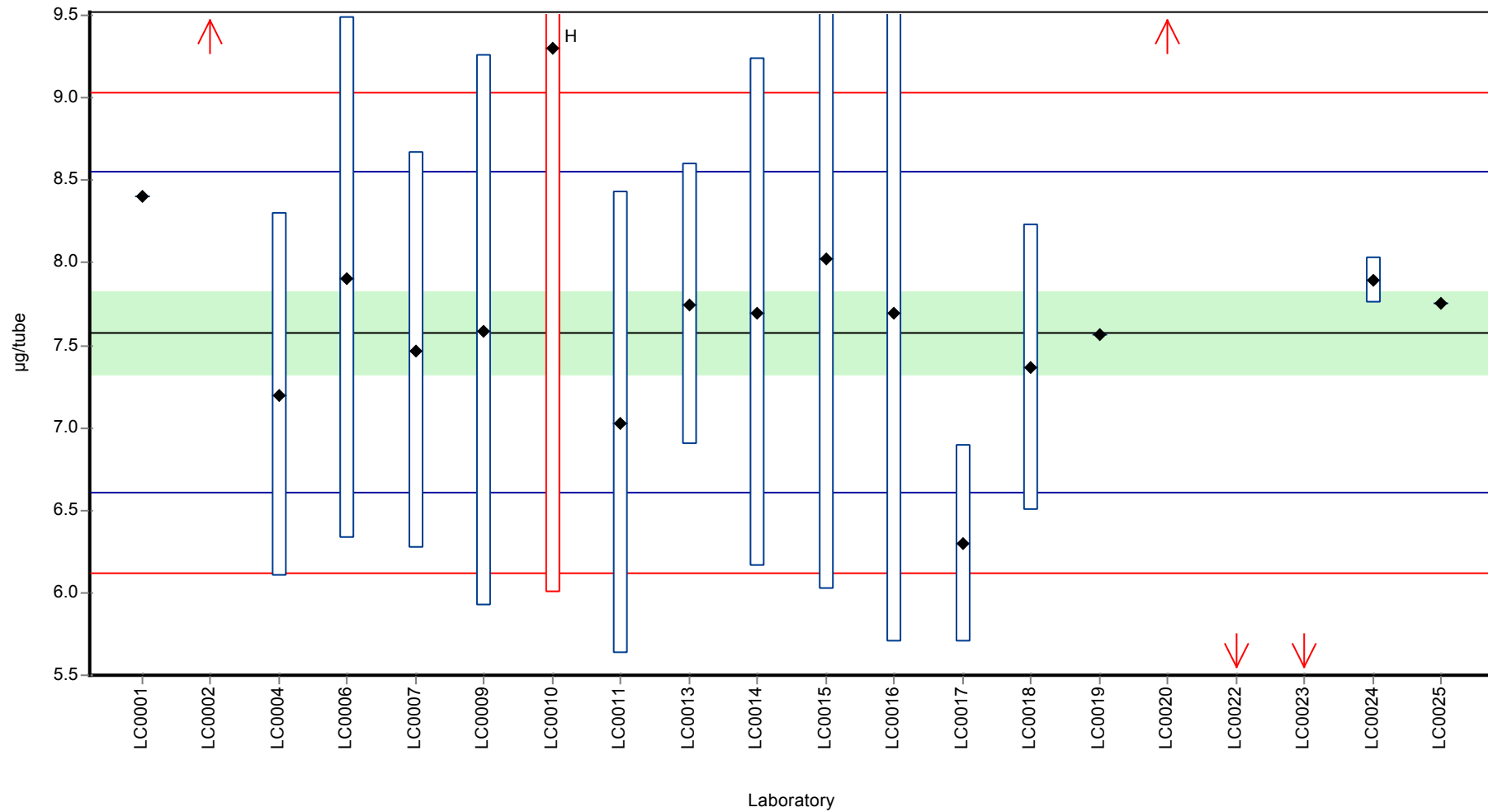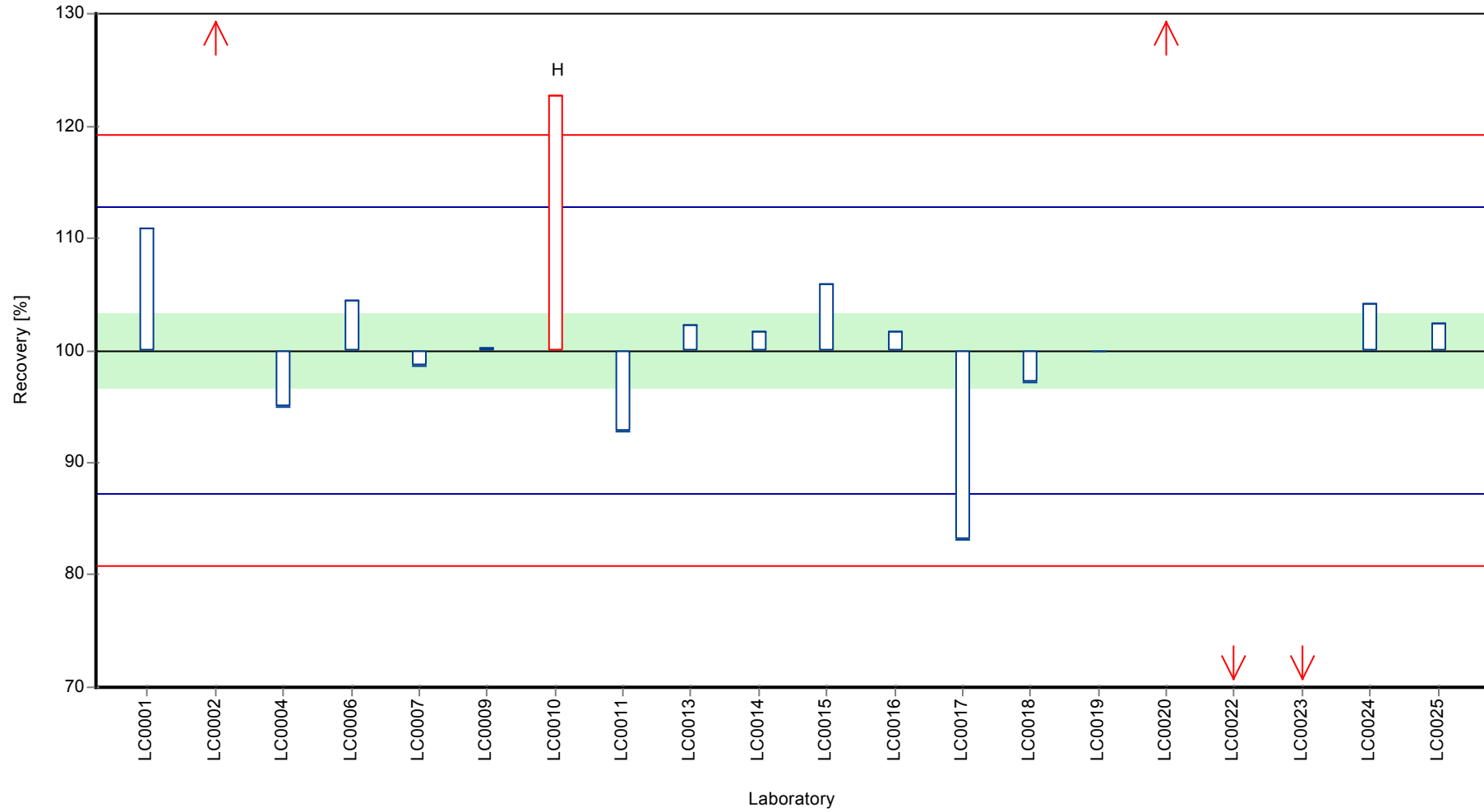
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Graphical presentation of results
Results

Recovery rate

Z-score

Parameter oriented report

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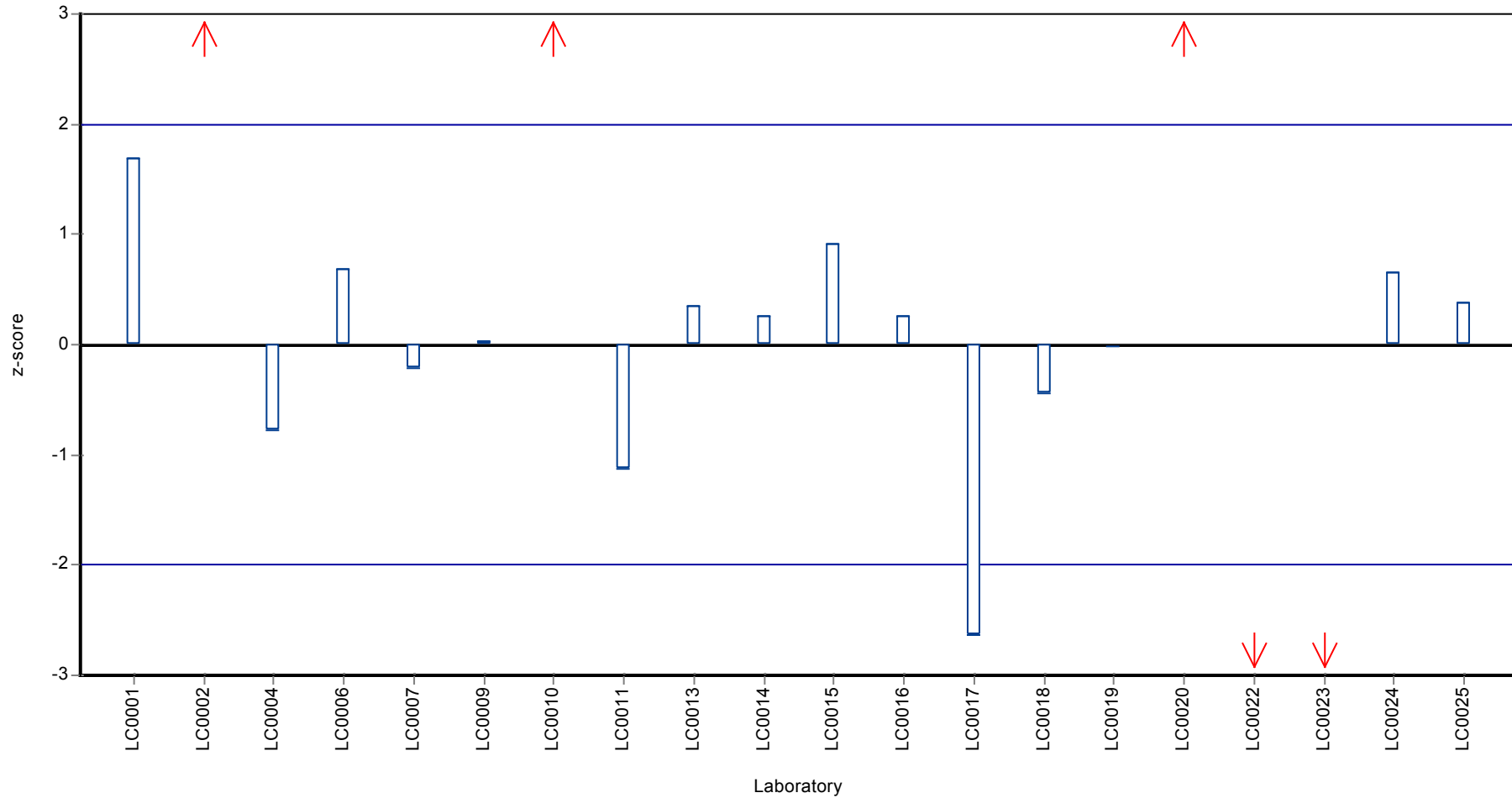
CL04 - CHC

cis-1,2-Dichloroethene

Unit	µg/tube
Target value ± Criteria*	5.42 ± 1.36
Minimum - Maximum	0.012 - 11
Control test value ± U	5.42 ± 0.428

Labcode	Result	± U	Recovery [%]*	z-score*	Comments
LC0001	6.9	-	127	1.09	
LC0002	6.5	2.6	120	0.79	
LC0004	4.3	0.67	79.3	-0.82	
LC0006	6.15	1.23	113	0.54	
LC0007	5.57	0.89	103	0.11	
LC0009	4.22	0.93	77.9	-0.88	
LC0010	1.4	0.33	25.8	-2.96	
LC0011	3.1	0.6	57.2	-1.71	
LC0013	1.7	0.19	31.4	-2.74	
LC0014	3.9	0.78	72	-1.12	
LC0015	5.98	1.5	110	0.41	
LC0016	5.7	1	105	0.21	
LC0017	< 5 (LOQ)	-	-	-	
LC0018	6.82	0.754	126	1.03	
LC0019	5.52	-	102	0.07	
LC0020	11	2.2	203	4.1	
LC0022	1.51	0.01	27.9	-2.88	
LC0023	0.012	0.002	0.2	-3.98	
LC0024	4.03	0.27	74.4	-1.02	
LC0025	5.88	-	108	0.34	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	4.75 ± 1.75	4.75 ± 1.75	µg/tube
Minimum	0.012	0.012	µg/tube
Maximum	11	11	µg/tube
Standard deviation	2.54	2.54	µg/tube
rel. Standard deviation	53.4	53.4	%
n	19	19	-

* see Section 4 Explanatory Notes

Graphical presentation of results

Results

Laboratory

Recovery rate

Z-score

Parameter oriented report

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CL04 - CHC

Tetrachloroethene

Unit	µg/tube
Mean ± CI (99%)	8.63 ± 0.993
Minimum - Maximum	5.8 - 11.6
Control test value ± U	8.64 ± 0.597

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	11.6	-	134	2.18	
LC0002	10.6	4.2	123	1.45	
LC0004	5.8	1.3	67.2	-2.07	
LC0006	9.1	1.82	105	0.35	
LC0007	8.34	1.33	96.7	-0.21	
LC0009	8.53	1.88	98.9	-0.07	
LC0010	10.5	2.63	122	1.37	
LC0011	8.39	1.7	97.3	-0.17	
LC0013	8.55	0.94	99.1	-0.06	
LC0014	7.5	1.5	86.9	-0.83	
LC0015	7.49	1.5	86.8	-0.83	
LC0016	8.3	2	96.2	-0.24	
LC0017	7.2	0.7	83.5	-1.05	
LC0018	8.603	0.633	99.7	-0.02	
LC0019	8.5	-	98.5	-0.09	
LC0020	14	2.8	162	3.94	H
LC0022	2.63	0.01	30.5	-4.39	H
LC0023	0.027	0.006	0.3	-6.3	H
LC0024	9.258	0.062	107	0.46	
LC0025	8.39	1.4	97.3	-0.17	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	8.17 ± 1.97	8.63 ± 0.993	µg/tube
Minimum	0.027	5.8	µg/tube
Maximum	14	11.6	µg/tube
Standard deviation	2.94	1.36	µg/tube
rel. Standard deviation	36	15.8	%
n	20	17	-

Graphical presentation of results
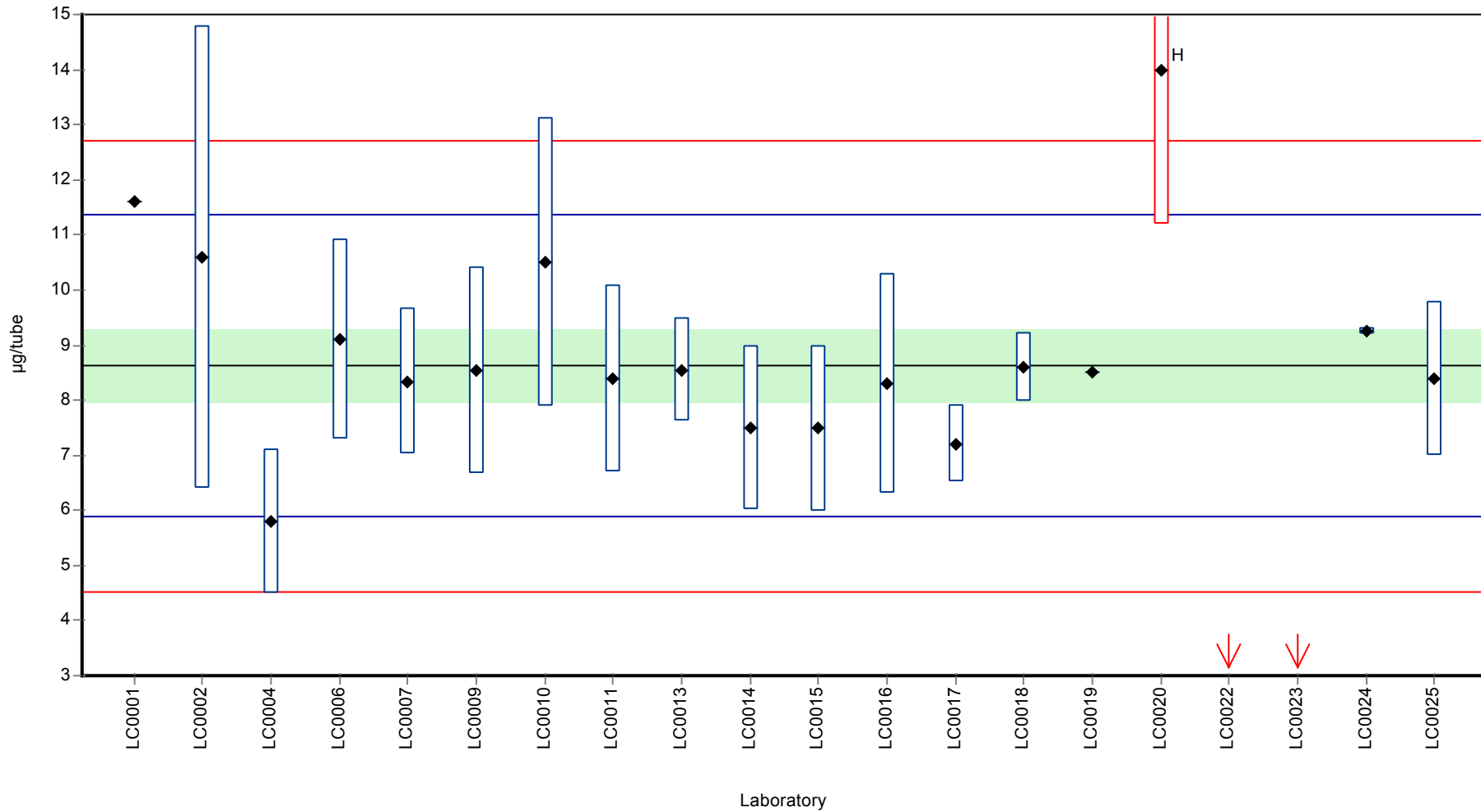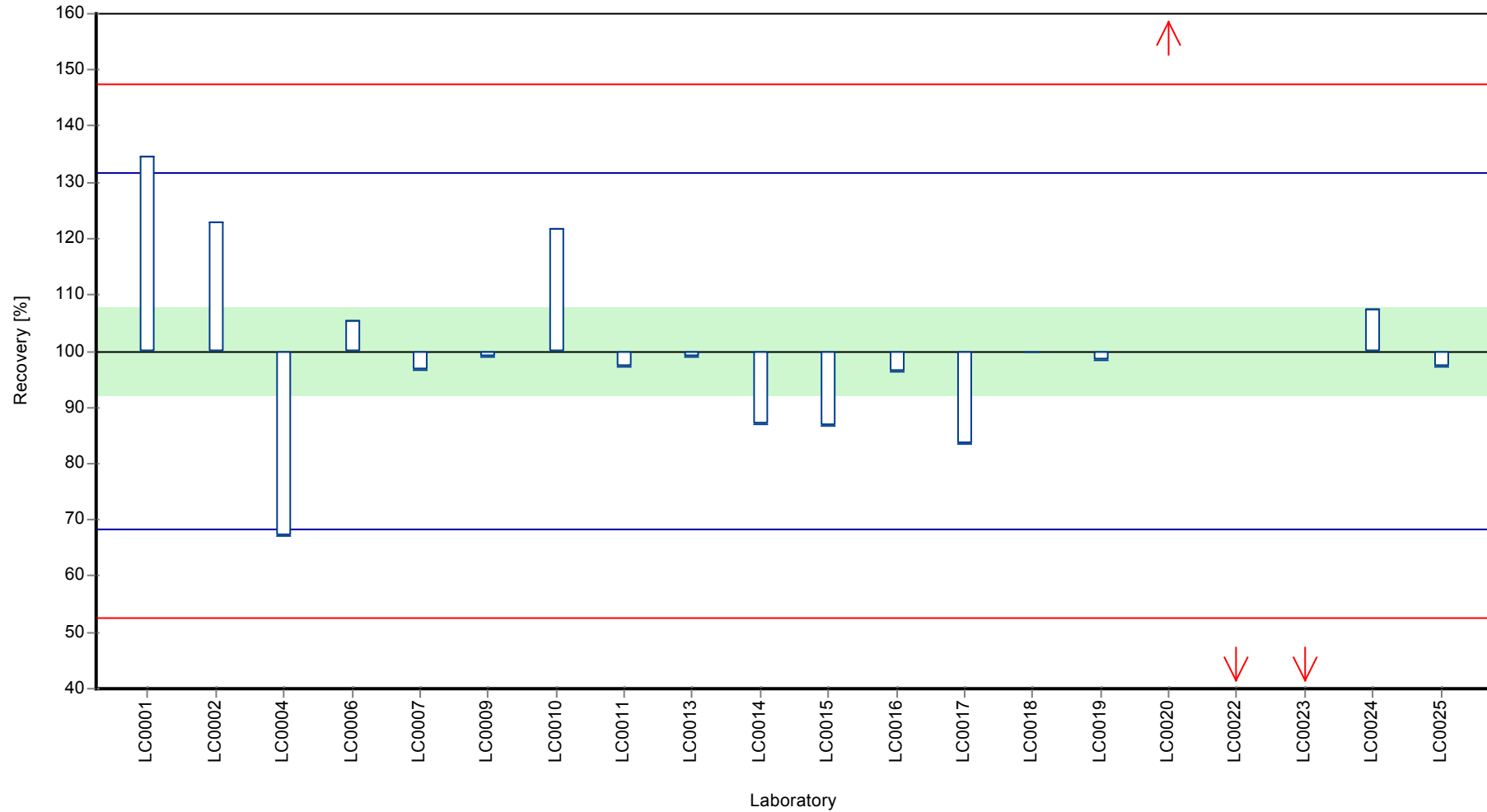
Results

Laboratory

Recovery rate
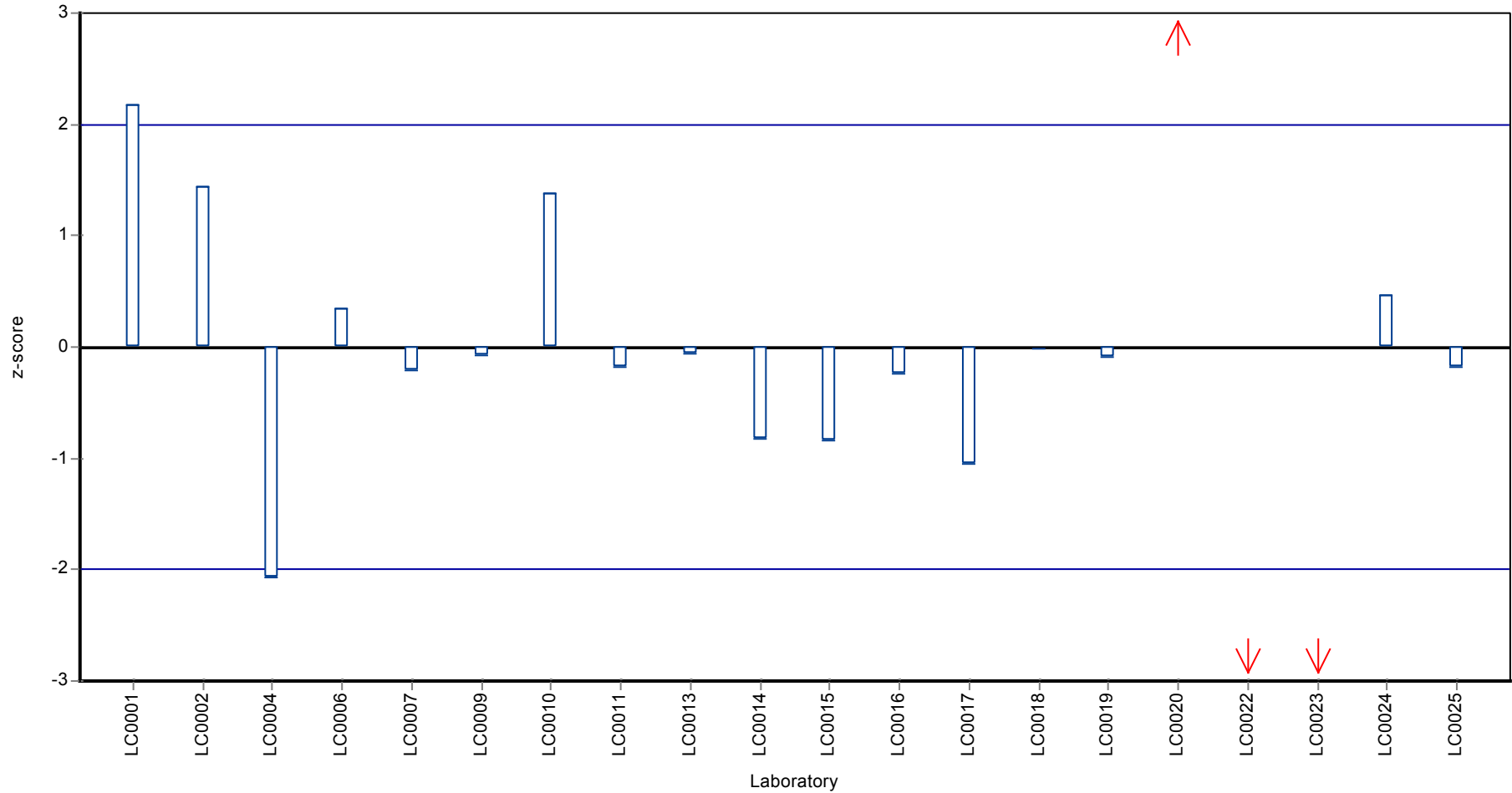
Z-score

Parameter oriented report

CL04 - CHC

Tetrachloromethane

Unit	µg/tube
Mean ± CI (99%)	9.2 ± 0.463
Minimum - Maximum	8 - 10.4
Control test value ± U	8.63 ± 0.489

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	12.5	5	136	5.53	H
LC0004	9.2	1.4	100	0.01	
LC0006	9.9	1.98	108	1.18	
LC0007	9.08	1.45	98.7	-0.19	
LC0009	9.69	2.13	105	0.83	
LC0010	10.4	2.58	113	2.01	
LC0011	8.43	1.7	91.7	-1.28	
LC0013	9.23	1.02	100	0.06	
LC0014	9.28	1.85	101	0.14	
LC0015	9.38	2	102	0.31	
LC0016	9.5	2	103	0.51	
LC0017	8	0.8	87	-2	
LC0018	8.513	0.799	92.6	-1.14	
LC0019	8.78	-	95.5	-0.69	
LC0020	16	3.2	174	11.4	H
LC0022	3.55	0.01	38.6	-9.44	H
LC0023	0.031	0.006	0.3	-15.3	H
LC0024	9.264	0.1	101	0.12	
LC0025	9.28	-	101	0.14	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	8.95 ± 2.16	9.2 ± 0.463	µg/tube
Minimum	0.031	8	µg/tube
Maximum	16	10.4	µg/tube
Standard deviation	3.14	0.598	µg/tube
rel. Standard deviation	35	6.5	%
n	19	15	-

Graphical presentation of results

Results

Recovery rate

Z-score

Parameter oriented report

CL04 - CHC

trans-1,2-Dichloroethene

Unit	µg/tube
Target value ± Criteria*	5.40 ± 1.35
Minimum - Maximum	0.007 - 11
Control test value ± U	5.40 ± 0.474

Labcode	Result	± U	Recovery [%]*	z-score*	Comments
LC0001	2.7	-	50	-2	
LC0002	8.2	3.3	152	2.07	
LC0004	2.9	0.45	53.7	-1.85	
LC0006	6.25	1.25	116	0.63	
LC0007	5.67	0.91	105	0.2	
LC0009	2.78	0.61	51.5	-1.94	
LC0010	0.41	0.14	7.6	-3.7	
LC0011	4.81	0.96	89.1	-0.44	
LC0013	0.38	0.04	7	-3.72	
LC0014	2.7	0.54	50	-2	
LC0015	6.3	1.5	117	0.67	
LC0016	5.9	1	109	0.37	
LC0017	-	-	-	-	
LC0018	4.413	0.352	81.7	-0.73	
LC0019	5.56	-	103	0.12	
LC0020	11	2.2	204	4.15	
LC0022	1.87	0.01	34.6	-2.61	
LC0023	0.007	0.002	0.1	-3.99	
LC0024	2.924	0.29	54.1	-1.83	
LC0025	5.4	-	100	0	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	4.22 ± 1.93	4.22 ± 1.93	µg/tube
Minimum	0.007	0.007	µg/tube
Maximum	11	11	µg/tube
Standard deviation	2.8	2.8	µg/tube
rel. Standard deviation	66.4	66.4	%
n	19	19	-

* see Section 4 Explanatory Notes

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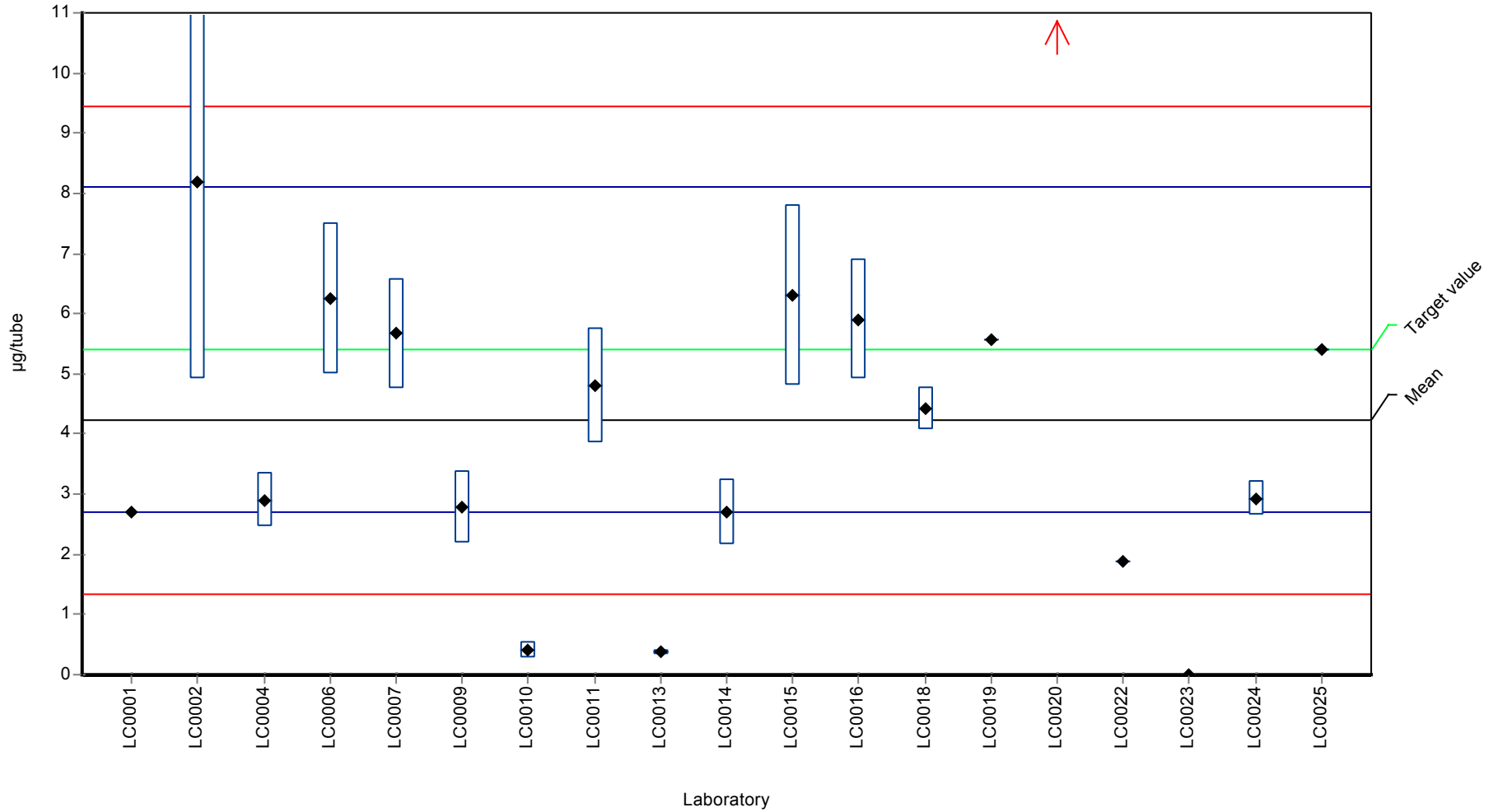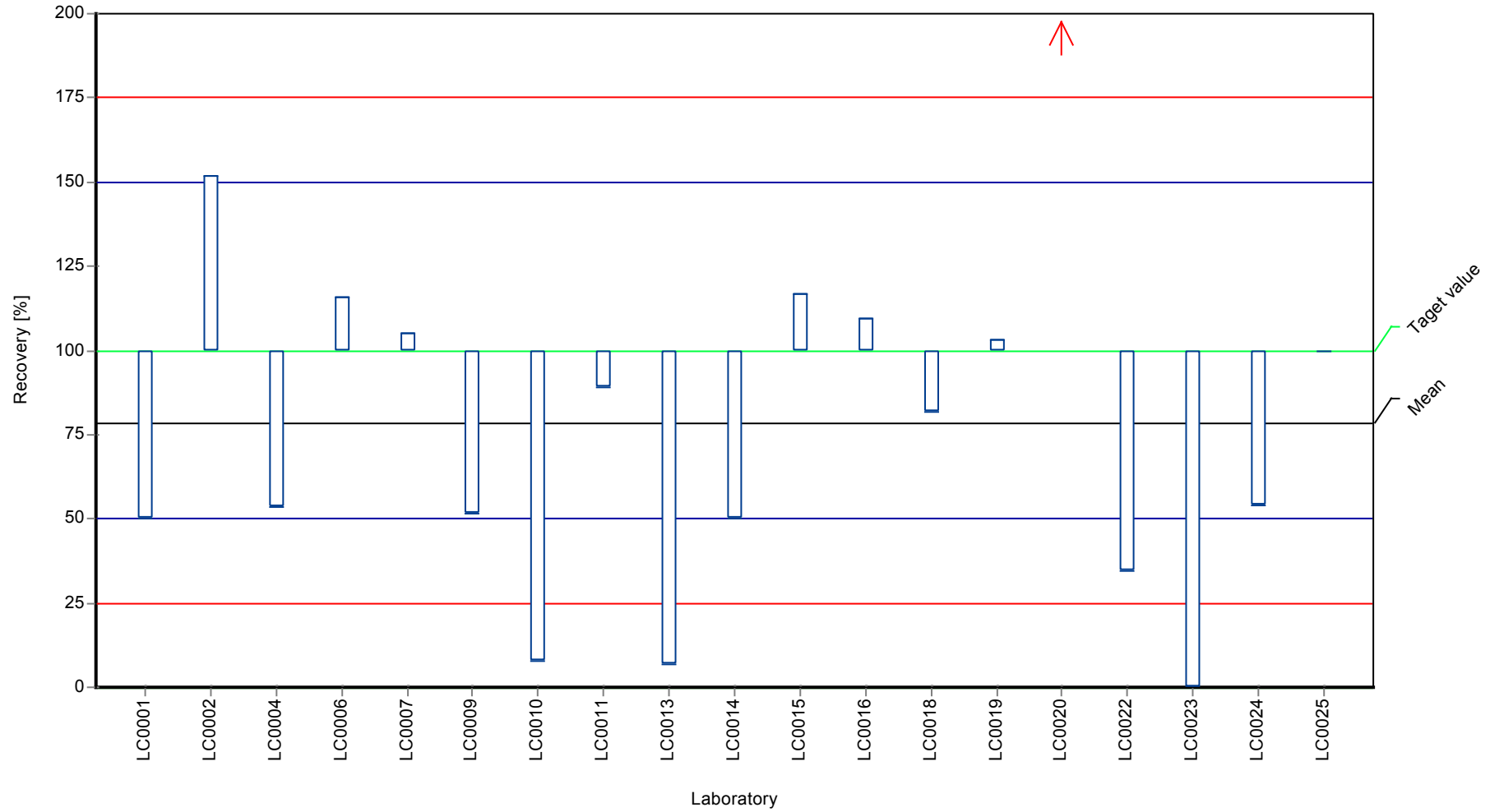
Sample: CL04, Parameter: trans-1,2-Dichloroethene

Graphical presentation of results

Results

Laboratory

Recovery rate
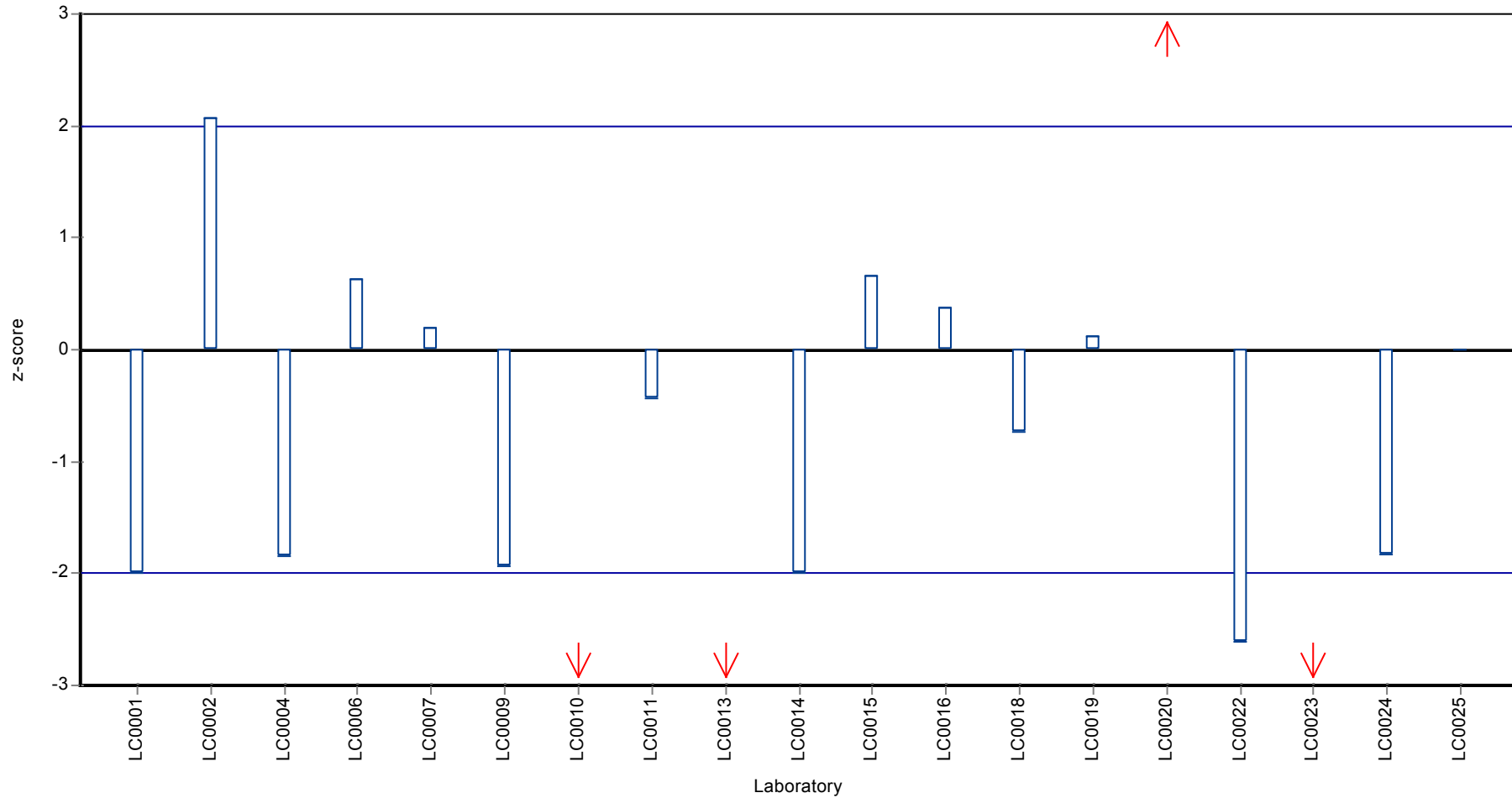
Z-score

Parameter oriented report

CL04 - CHC

Trichloroethene

Unit	µg/tube
Mean ± CI (99%)	7.27 ± 0.832
Minimum - Maximum	4.5 - 9.7
Control test value ± U	7.28 ± 0.399

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	10.7	-	147	3.09	H
LC0002	9.7	3.9	133	2.19	
LC0004	7.5	0.86	103	0.21	
LC0006	8.1	1.62	111	0.75	
LC0007	7.13	1.14	98.1	-0.13	
LC0009	7.28	1.6	100	0.01	
LC0010	6.4	1.88	88	-0.78	
LC0011	6.67	1.34	91.7	-0.54	
LC0013	6.55	0.72	90.1	-0.65	
LC0014	7.1	1.42	97.7	-0.15	
LC0015	7.16	1.5	98.5	-0.1	
LC0016	6.9	2	94.9	-0.33	
LC0017	4.5	0.5	61.9	-2.5	
LC0018	8.653	0.297	119	1.25	
LC0019	7.3	-	100	0.03	
LC0020	13	2.6	179	5.17	H
LC0022	2.4	0.01	33	-4.39	H
LC0023	0.02	0.004	0.3	-6.54	H
LC0024	7.556	0.33	104	0.26	
LC0025	7.82	-	108	0.5	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	7.12 ± 1.81	7.27 ± 0.832	µg/tube
Minimum	0.02	4.5	µg/tube
Maximum	13	9.7	µg/tube
Standard deviation	2.7	1.11	µg/tube
rel. Standard deviation	38	15.3	%
n	20	16	-

Graphical presentation of results
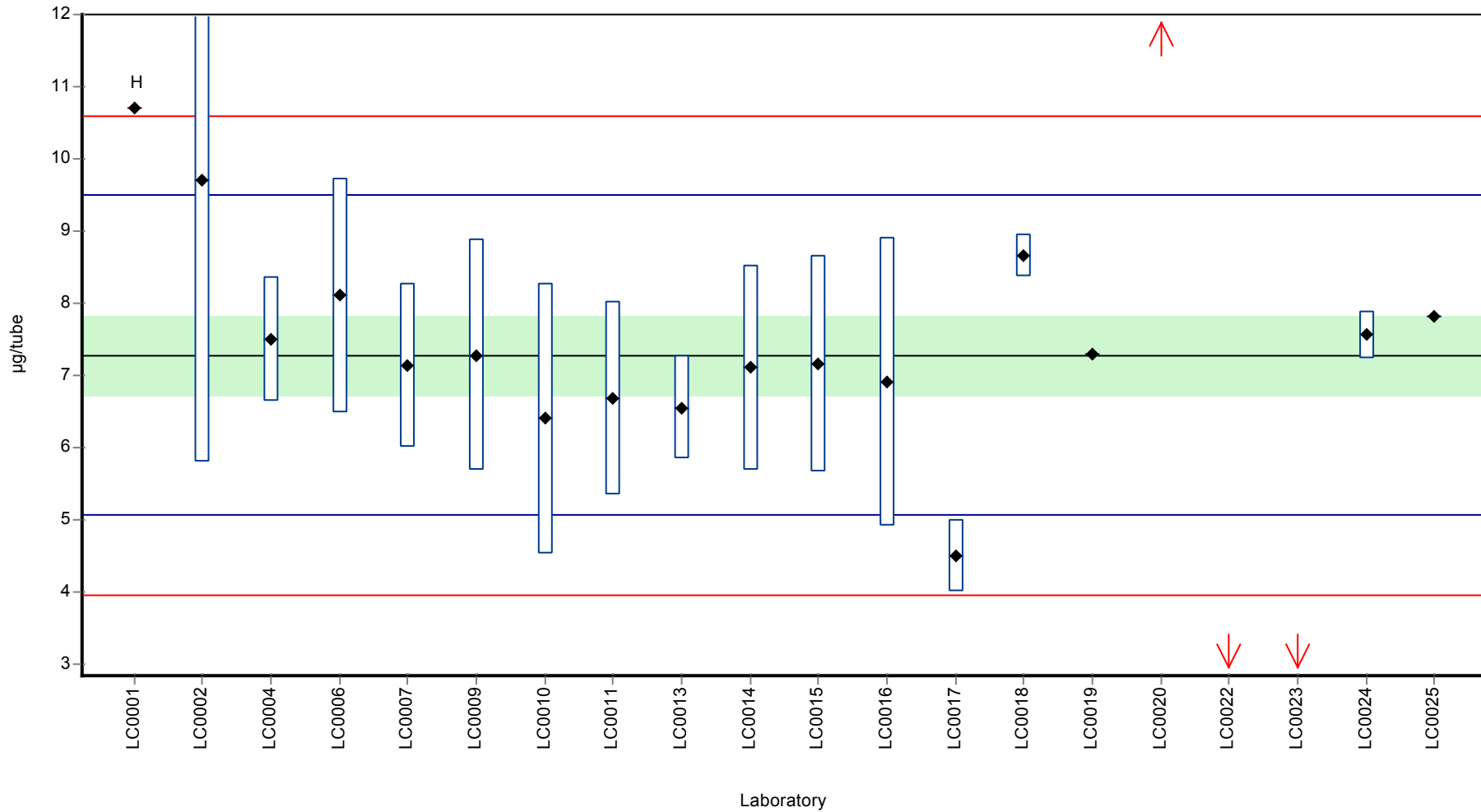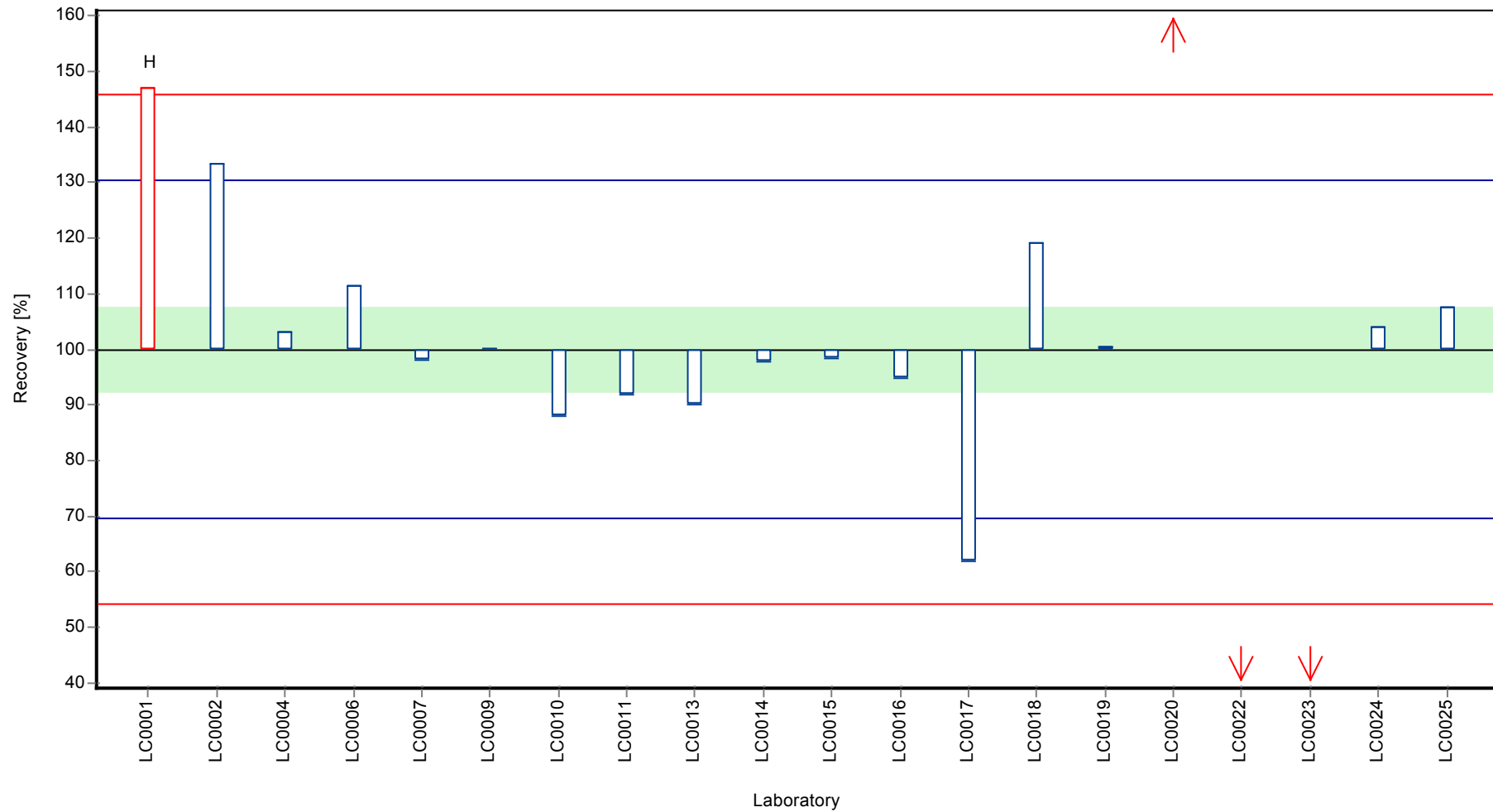
Results

Recovery rate
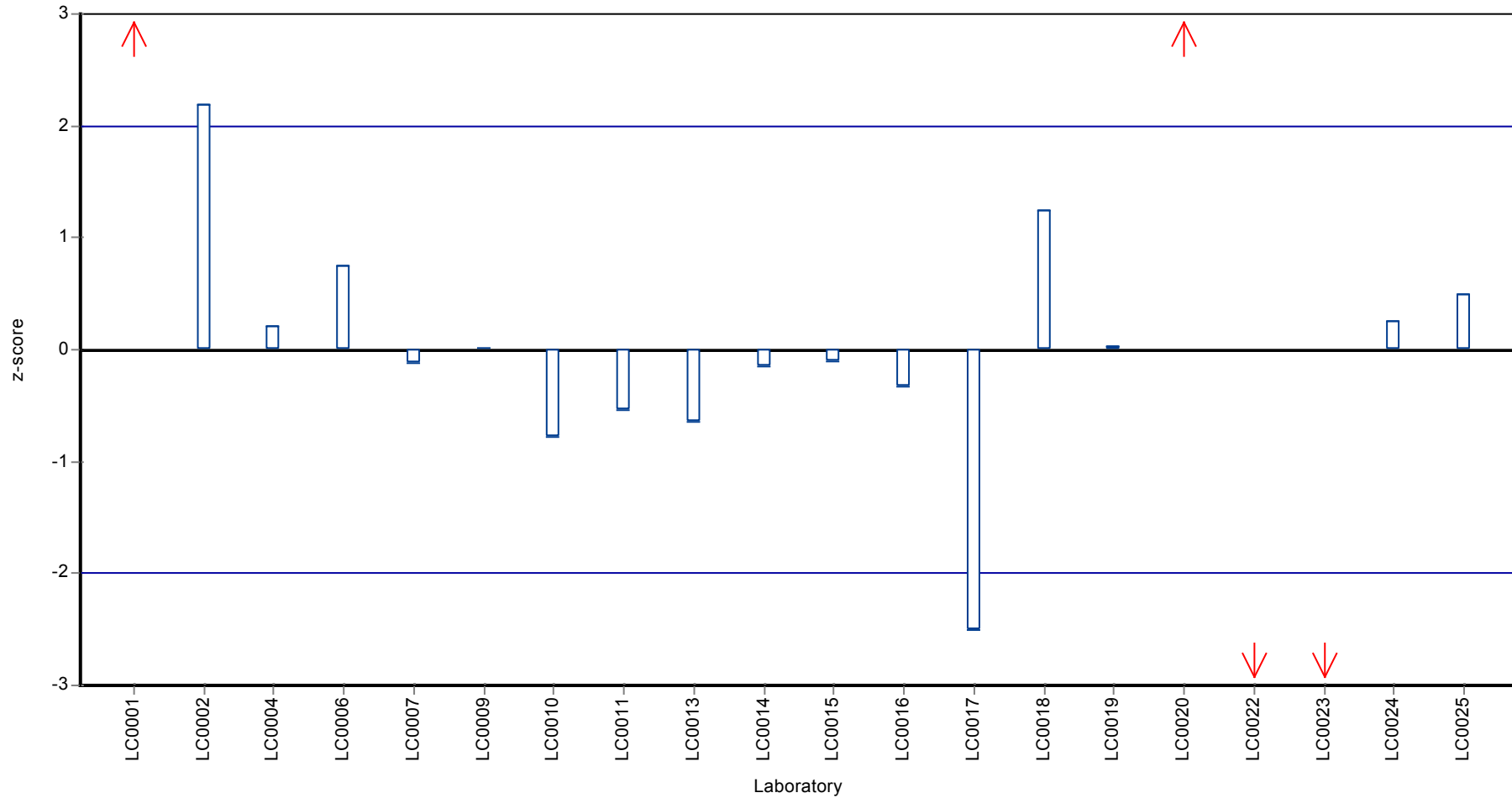
Z-score

Parameter oriented report

CL04 - CHC

Trichloromethane

Unit	µg/tube
Mean ± CI (99%)	7.01 ± 0.409
Minimum - Maximum	6.2 - 8.1
Control test value ± U	6.49 ± 0.338

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	7.92	-	113	1.67	
LC0002	8.1	3.2	116	2	
LC0004	6.6	1.02	94.2	-0.75	
LC0006	6.87	1.37	98	-0.25	
LC0007	6.59	1.05	94	-0.77	
LC0009	7.04	1.55	100	0.06	
LC0010	7.3	2.02	104	0.54	
LC0011	6.28	1.35	89.6	-1.33	
LC0013	6.93	0.76	98.9	-0.14	
LC0014	6.2	1.24	88.5	-1.48	
LC0015	6.86	1.5	97.9	-0.27	
LC0016	7	2	99.9	-0.01	
LC0017	4.9	0.5	69.9	-3.86	H
LC0018	7.68	0.661	110	1.23	
LC0019	7.08	-	101	0.13	
LC0020	13	2.6	186	11	H
LC0022	1.89	0.01	27	-9.38	H
LC0023	0.021	0.004	0.3	-12.8	H
LC0024	6.471	1.18	92.4	-0.98	
LC0025	7.19	-	103	0.34	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.6 ± 1.66	7.01 ± 0.409	µg/tube
Minimum	0.021	6.2	µg/tube
Maximum	13	8.1	µg/tube
Standard deviation	2.48	0.545	µg/tube
rel. Standard deviation	37.5	7.78	%
n	20	16	-

Graphical presentation of results
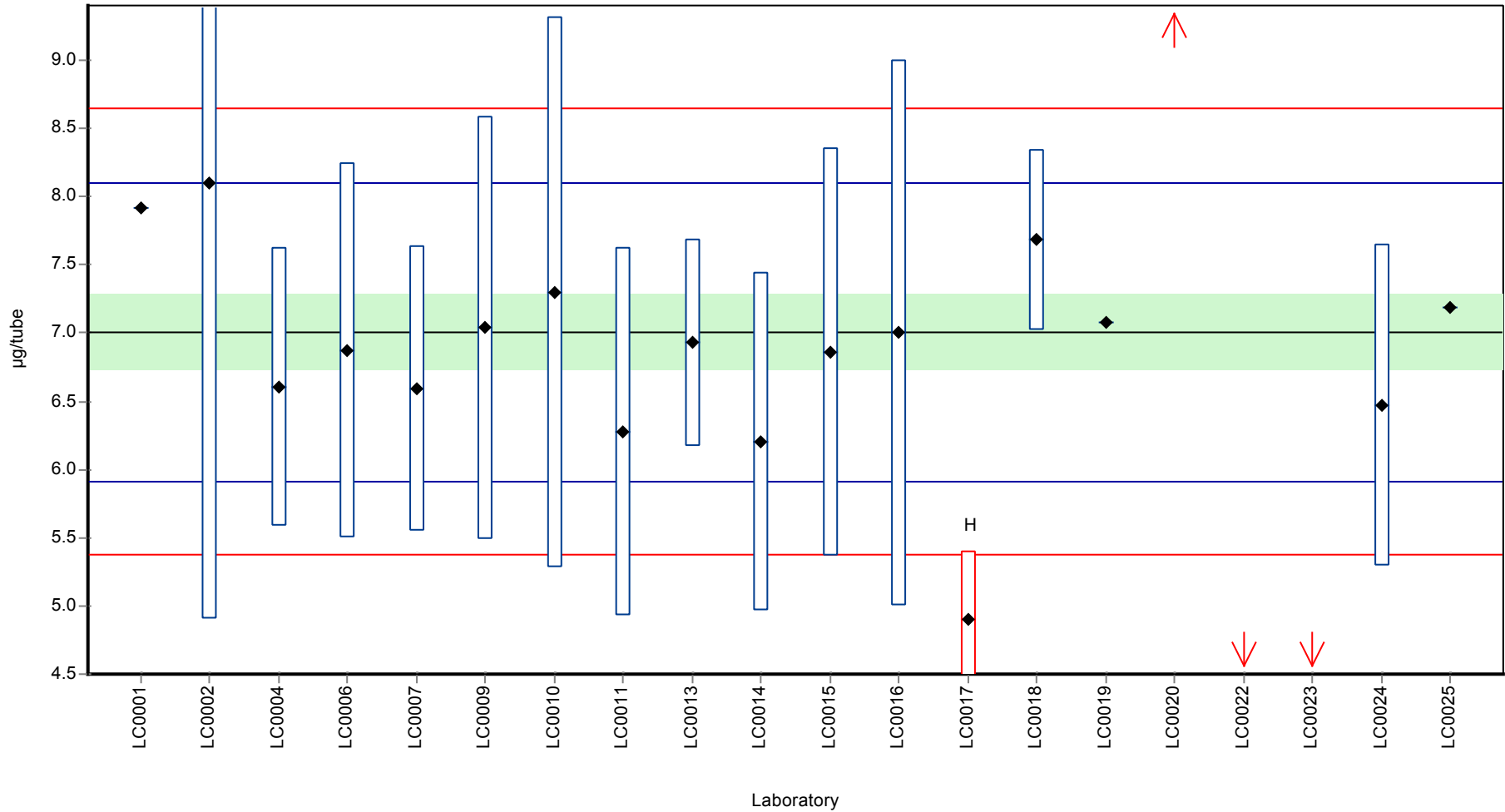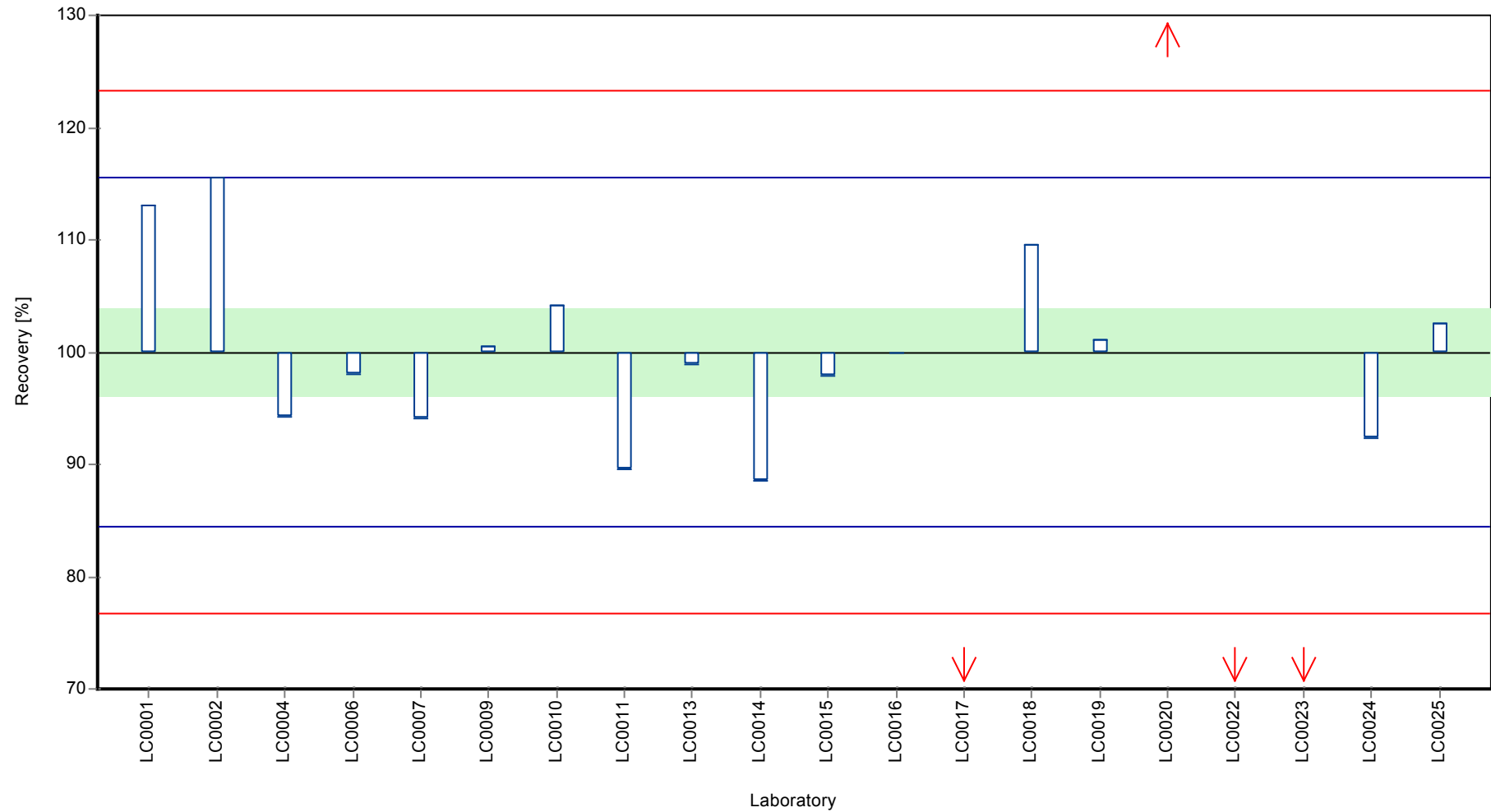
Results

Recovery rate
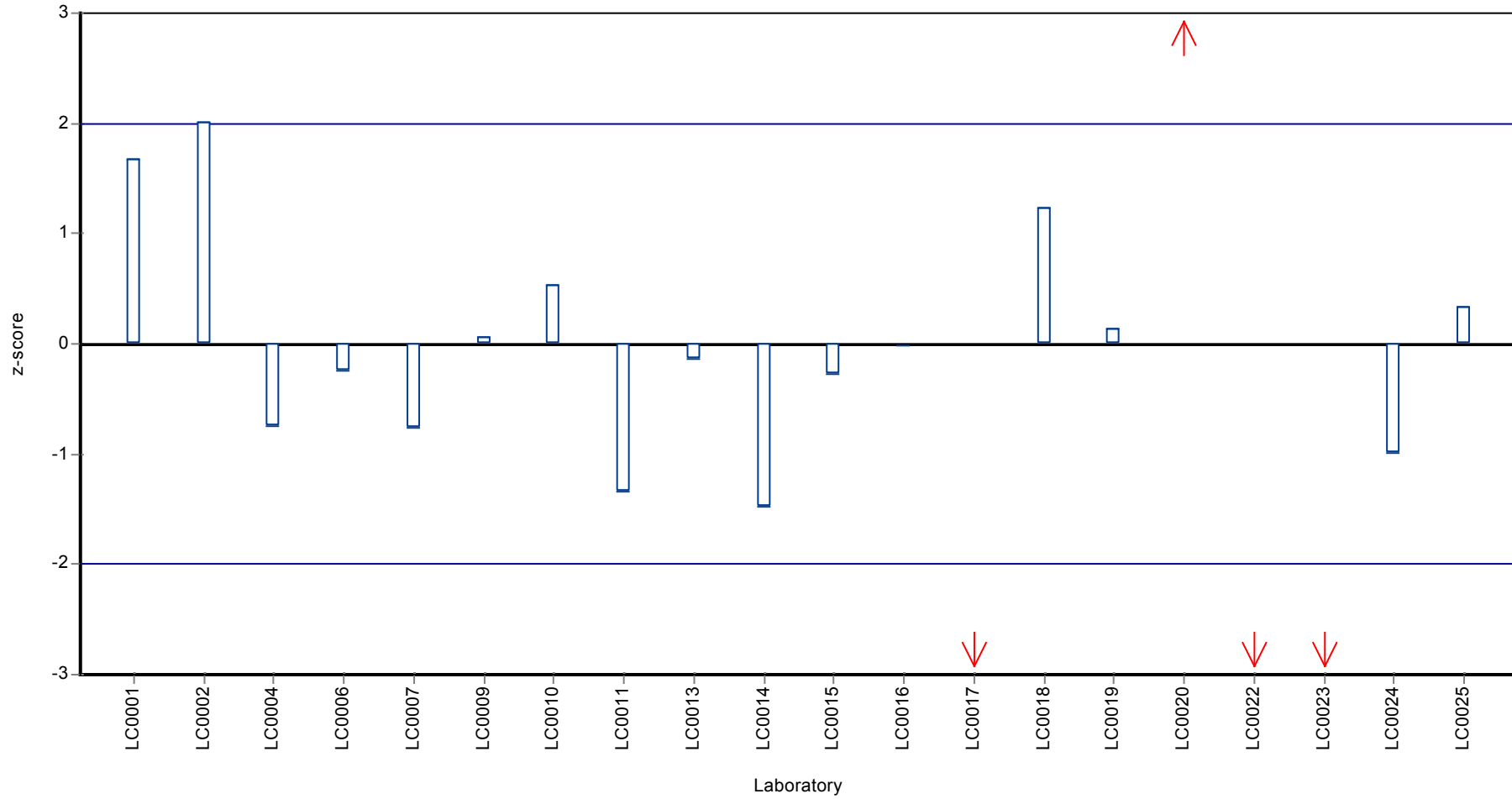
Z-score

8 Laboratory oriented report

The laboratory oriented report is sorted by laboratory code.

The following results were achieved:

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	8.4	-	0.486	111	1.69
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	6.9	-	1.36	127	1.09
Tetrachloroethene	µg/tube	8.63 ±	0.993	11.6	-	1.36	134	2.18
Tetrachloromethane	µg/tube	9.2 ±	0.463	-	-	0.598	-	-
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	2.7	-	1.35	50	-2
Trichloroethene	µg/tube	7.27 ±	0.832	10.7	-	1.11	147	3.09
Trichloromethane	µg/tube	7.01 ±	0.409	7.92	-	0.545	113	1.67

* see Section 4 Explanatory Notes
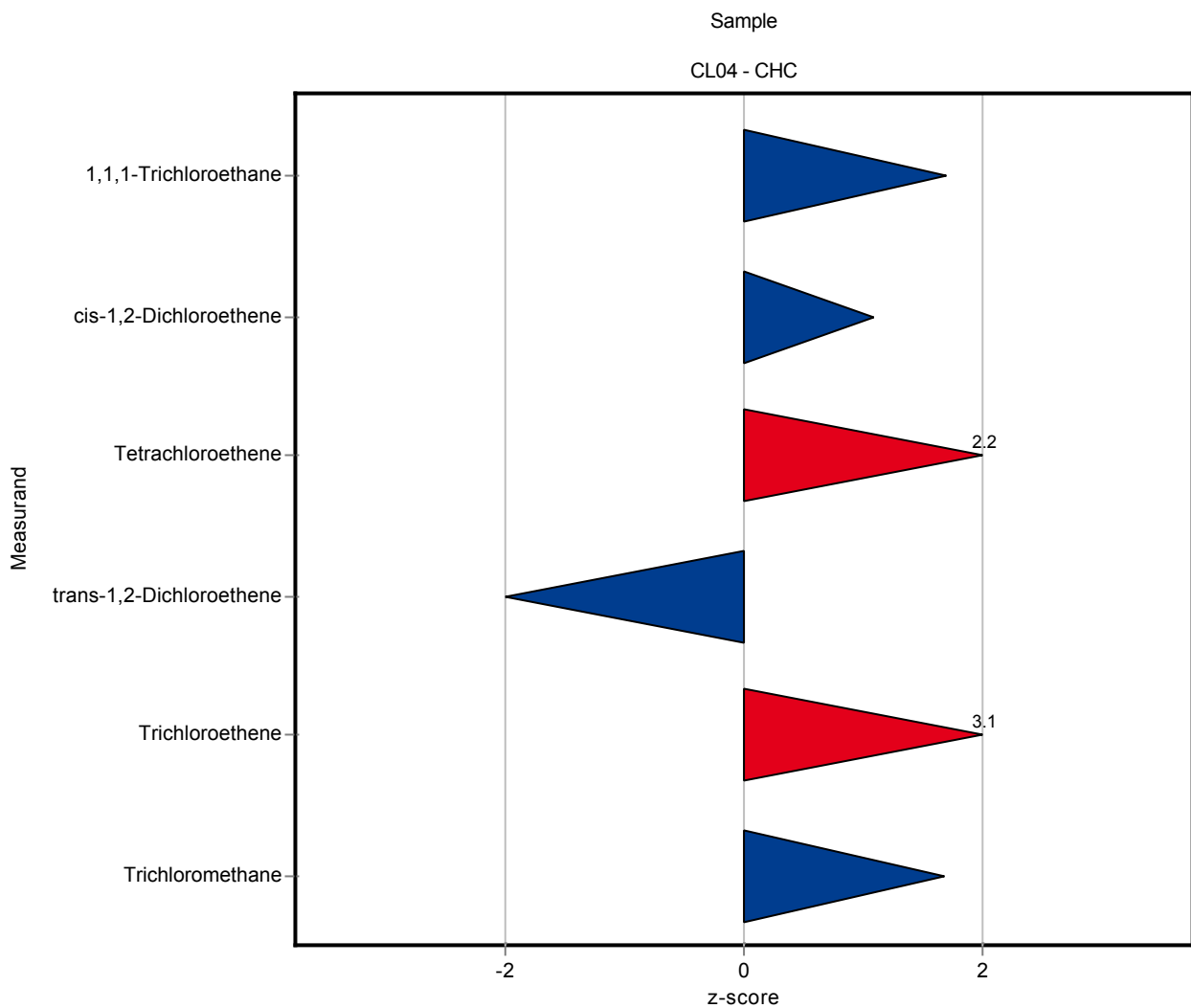
Sample

CL04 - CHC

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27	±	0.556	8.9	3.6	0.764	142	3.44
Ethylbenzene	µg/tube	7.45	±	1.03	9.5	3.8	1.5	128	1.37
o-Xylene	µg/tube	6.96	±	1.21	8.1	3.2	1.76	116	0.65
Sum of m-Xylene and p-Xylene	µg/tube	14.2	±	2.08	18.5	7.4	2.94	130	1.46
Toluene	µg/tube	6.95	±	0.856	7.9	3.2	1.21	114	0.78
n-Decane	µg/tube	5.76	±	1.18	12	4.8	1.42	208	4.41
n-Heptane	µg/tube	8.76	±	1.24	12.2	4.9	1.61	139	2.14
n-Hexane	µg/tube	7.54	±	1.27	7.4	3	1.41	98.2	-0.1
n-Nonane	µg/tube	7.7	±	1.65	13.1	5.2	2.13	170	2.53
n-Octane	µg/tube	8.23	±	1.3	12.7	5.1	1.67	154	2.67
n-Pentane	µg/tube	8.54	±	2.54	12.6	5	3.17	148	1.28

Sample: CL04

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58	±	0.377	10	4	0.486	132	4.98
cis-1,2-Dichloroethene	µg/tube	5.42*	±	1.36	6.5	2.6	1.36	120	0.79
Tetrachloroethene	µg/tube	8.63	±	0.993	10.6	4.2	1.36	123	1.45
Tetrachloromethane	µg/tube	9.2	±	0.463	12.5	5	0.598	136	5.53
trans-1,2-Dichloroethene	µg/tube	5.4*	±	1.35	8.2	3.3	1.35	152	2.07
Trichloroethene	µg/tube	7.27	±	0.832	9.7	3.9	1.11	133	2.19
Trichloromethane	µg/tube	7.01	±	0.409	8.1	3.2	0.545	116	2

* see Section 4 Explanatory Notes
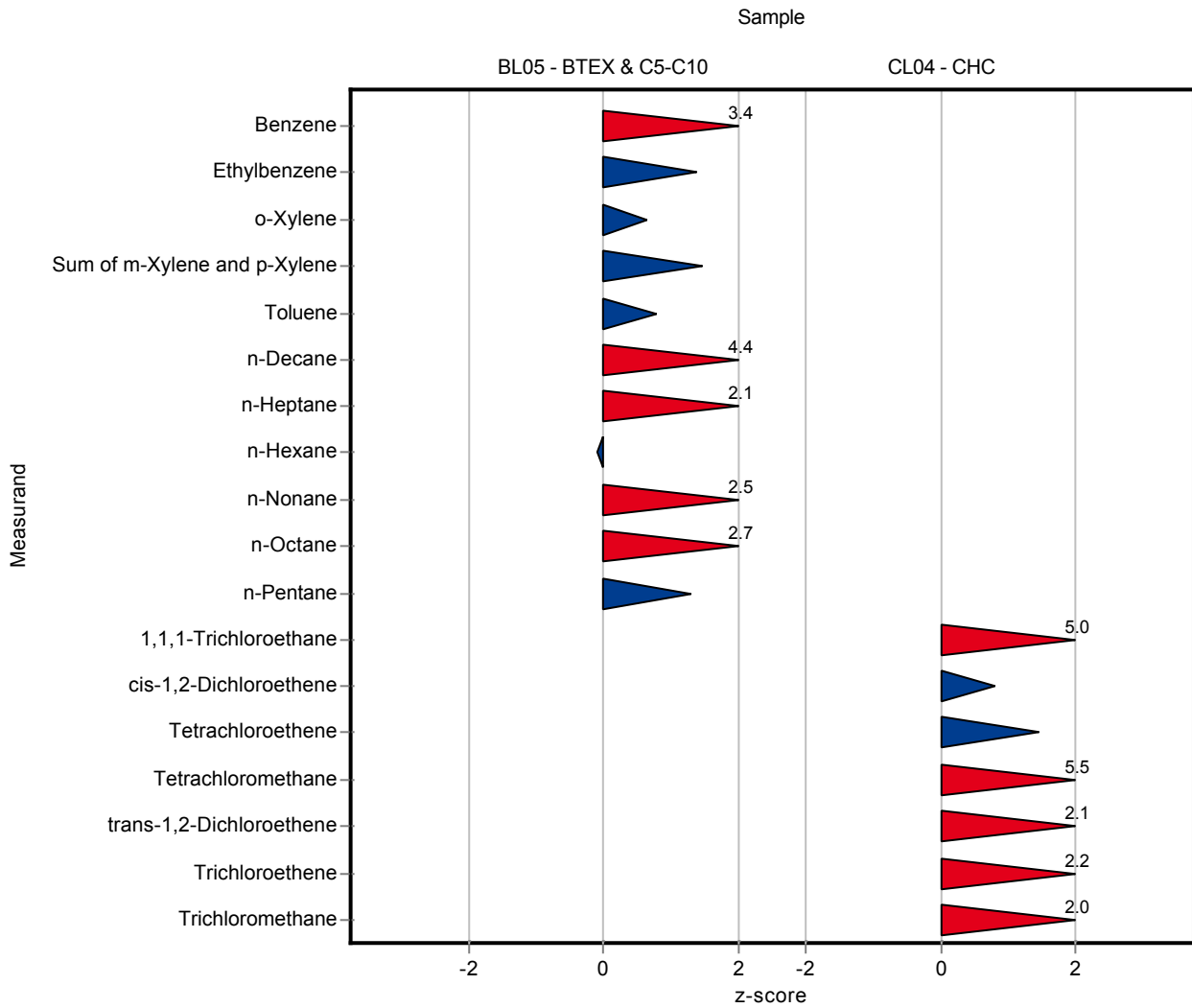
The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	1.07	0.21	0.764	17.1	-6.81
Ethylbenzene	µg/tube	7.45 ±	1.03	1.27	0.25	1.5	17	-4.12
o-Xylene	µg/tube	6.96 ±	1.21	1.33	0.27	1.76	19.1	-3.2
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	2.42	0.48	2.94	17	-4.01
Toluene	µg/tube	6.95 ±	0.856	1.29	0.26	1.21	18.6	-4.68
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample

BL05 - BTEX & C5-C10

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6	0.65	0.764	95.7	-0.35
Ethylbenzene	µg/tube	7.45 ±	1.03	7.3	0.79	1.5	98	-0.1
o-Xylene	µg/tube	6.96 ±	1.21	7.1	0.8	1.76	102	0.08
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	14	1.6	2.94	98.5	-0.07
Toluene	µg/tube	6.95 ±	0.856	6.7	0.71	1.21	96.4	-0.21
n-Decane	µg/tube	5.76 ±	1.18	5.6	0.84	1.42	97.2	-0.11
n-Heptane	µg/tube	8.76 ±	1.24	6.6	1	1.61	75.4	-1.34
n-Hexane	µg/tube	7.54 ±	1.27	6.3	0.95	1.41	83.6	-0.88
n-Nonane	µg/tube	7.7 ±	1.65	6.6	0.99	2.13	85.7	-0.52
n-Octane	µg/tube	8.23 ±	1.3	6.8	1	1.67	82.7	-0.85
n-Pentane	µg/tube	8.54 ±	2.54	5.7	0.85	3.17	66.8	-0.9

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.2	1.1	0.486	95	-0.78
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	4.3	0.67	1.36	79.3	-0.82
Tetrachloroethene	µg/tube	8.63 ±	0.993	5.8	1.3	1.36	67.2	-2.07
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.2	1.4	0.598	100	0.01
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	2.9	0.45	1.35	53.7	-1.85
Trichloroethene	µg/tube	7.27 ±	0.832	7.5	0.86	1.11	103	0.21
Trichloromethane	µg/tube	7.01 ±	0.409	6.6	1.02	0.545	94.2	-0.75

* see Section 4 Explanatory Notes
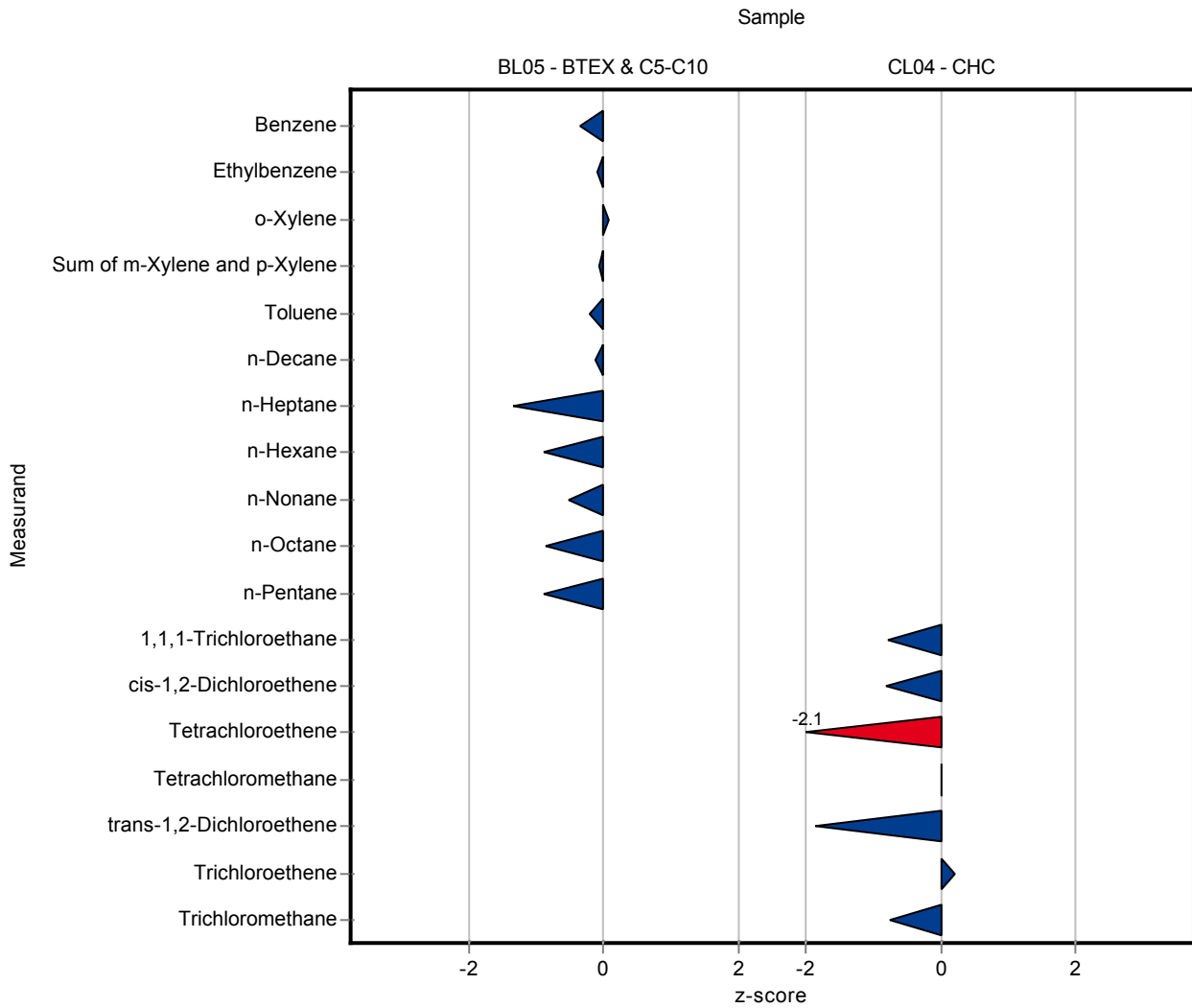
Sample

The following results were achieved:

94

Sample: BL05

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27	±	0.556	6.7	1.3	0.764	107	0.56
Ethylbenzene	µg/tube	7.45	±	1.03	7.5	1.5	1.5	101	0.03
o-Xylene	µg/tube	6.96	±	1.21	7.1	1.4	1.76	102	0.08
Sum of m-Xylene and p-Xylene	µg/tube	14.2	±	2.08	14.8	3	2.94	104	0.2
Toluene	µg/tube	6.95	±	0.856	7.3	1.5	1.21	105	0.29
n-Decane	µg/tube	5.76	±	1.18	6.9	1.4	1.42	120	0.81
n-Heptane	µg/tube	8.76	±	1.24	8.4	1.7	1.61	95.9	-0.22
n-Hexane	µg/tube	7.54	±	1.27	7.9	1.6	1.41	105	0.26
n-Nonane	µg/tube	7.7	±	1.65	7.9	1.6	2.13	103	0.09
n-Octane	µg/tube	8.23	±	1.3	8.7	1.3	1.67	106	0.28
n-Pentane	µg/tube	8.54	±	2.54	6.9	1.4	3.17	80.8	-0.52

Sample

BL05 - BTEX & C5-C10

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.56	1.31	0.764	105	0.38
Ethylbenzene	µg/tube	7.45 ±	1.03	7.25	1.45	1.5	97.3	-0.13
o-Xylene	µg/tube	6.96 ±	1.21	7.14	1.43	1.76	103	0.1
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	13.87	2.77	2.94	97.6	-0.12
Toluene	µg/tube	6.95 ±	0.856	6.82	1.36	1.21	98.1	-0.11
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

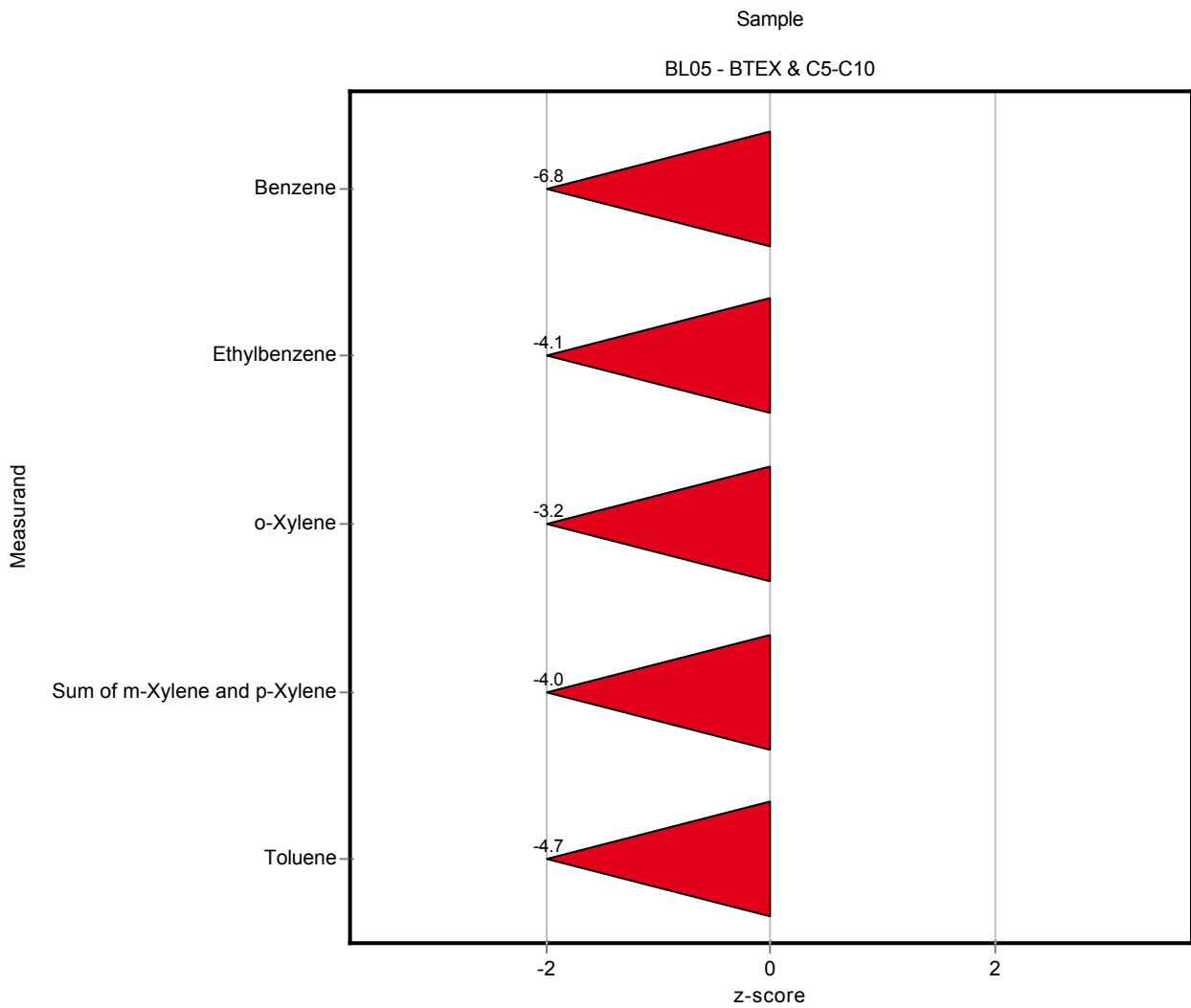| Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.91	1.58	0.486	104	0.69
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	6.15	1.23	1.36	113	0.54
Tetrachloroethene	µg/tube	8.63 ±	0.993	9.1	1.82	1.36	105	0.35
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.9	1.98	0.598	108	1.18
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	6.25	1.25	1.35	116	0.63
Trichloroethene	µg/tube	7.27 ±	0.832	8.1	1.62	1.11	111	0.75
Trichloromethane	µg/tube	7.01 ±	0.409	6.87	1.37	0.545	98	-0.25

* see Section 4 Explanatory Notes
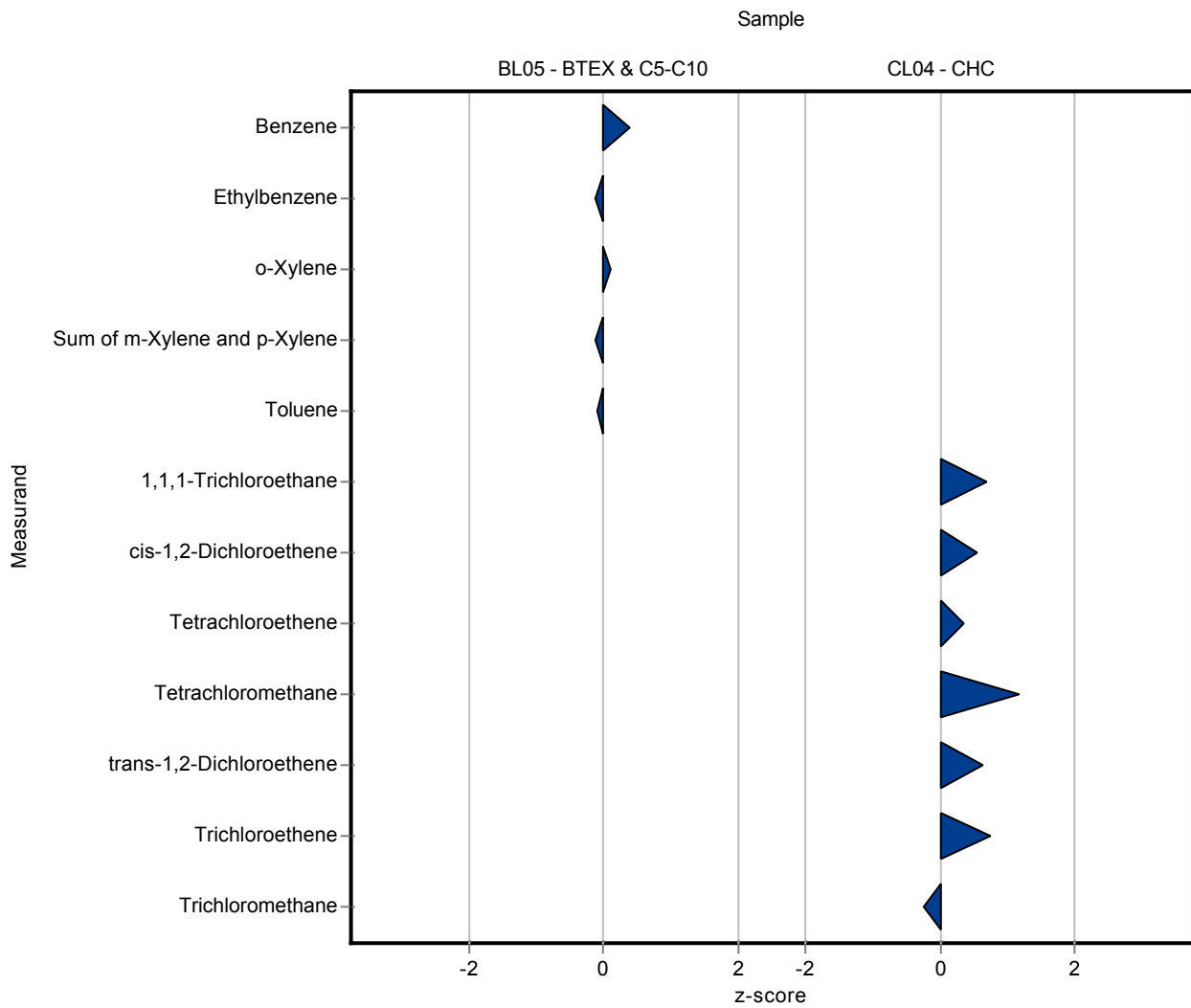
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27	±	0.556	6.5	1.08	0.764	104	0.3
Ethylbenzene	µg/tube	7.45	±	1.03	8	1.06	1.5	107	0.37
o-Xylene	µg/tube	6.96	±	1.21	6.97	1.4	1.76	100	0.00
Sum of m-Xylene and p-Xylene	µg/tube	14.2	±	2.08	14.87	1.4	2.94	105	0.22
Toluene	µg/tube	6.95	±	0.856	6.94	1.26	1.21	99.9	-0.01
n-Decane	µg/tube	5.76	±	1.18	7.4	1.48	1.42	129	1.16
n-Heptane	µg/tube	8.76	±	1.24	10.2	2	1.61	116	0.9
n-Hexane	µg/tube	7.54	±	1.27	9.96	2	1.41	132	1.72
n-Nonane	µg/tube	7.7	±	1.65	10.5	2.1	2.13	136	1.31
n-Octane	µg/tube	8.23	±	1.3	10.2	2	1.67	124	1.18
n-Pentane	µg/tube	8.54	±	2.54	11.6	2.3	3.17	136	0.97

Sample: CL04

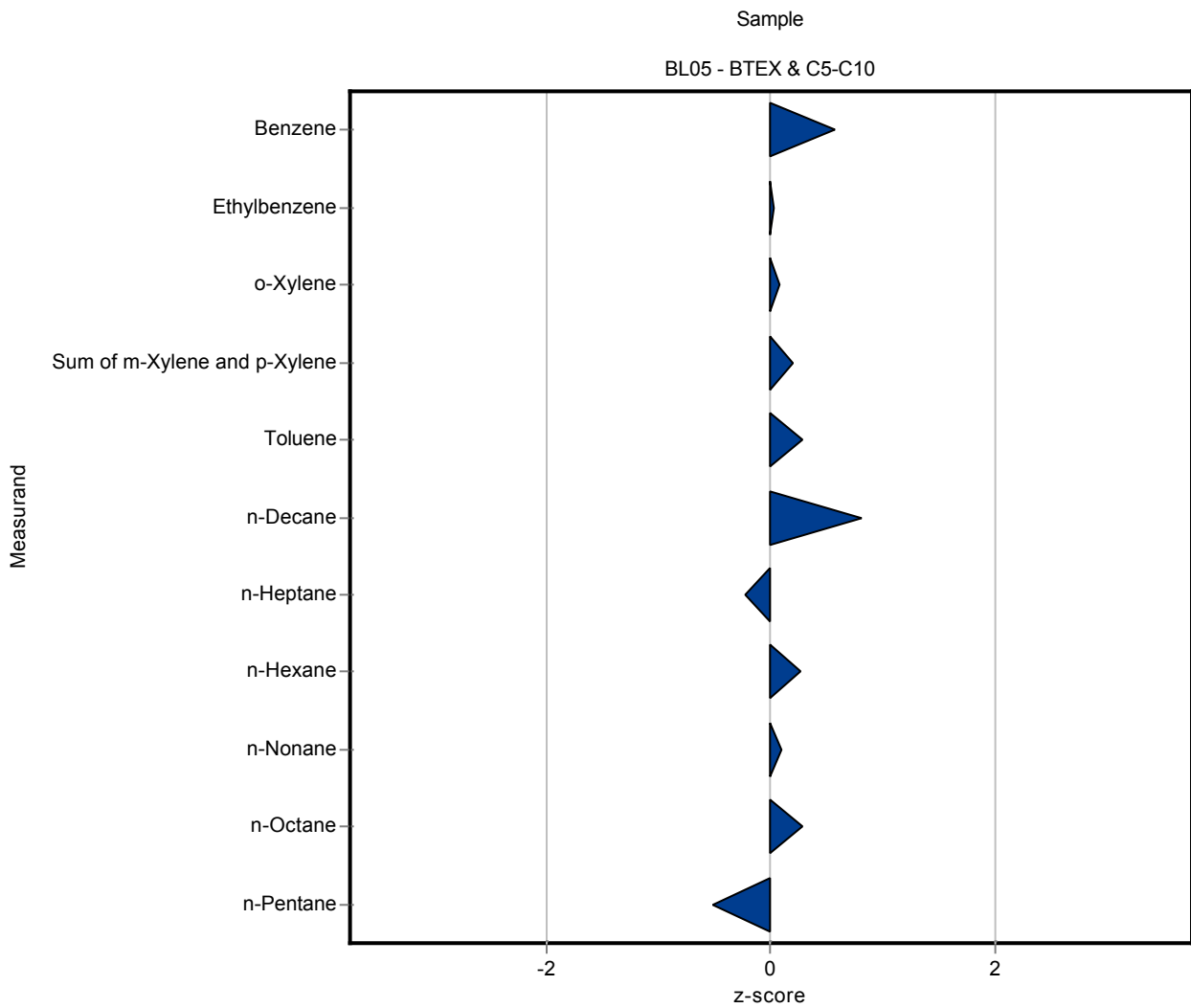| Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58	±	0.377	7.47	1.2	0.486	98.6	-0.22
cis-1,2-Dichloroethene	µg/tube	5.42*	±	1.36	5.57	0.89	1.36	103	0.11
Tetrachloroethene	µg/tube	8.63	±	0.993	8.34	1.33	1.36	96.7	-0.21
Tetrachloromethane	µg/tube	9.2	±	0.463	9.08	1.45	0.598	98.7	-0.19
trans-1,2-Dichloroethene	µg/tube	5.4*	±	1.35	5.67	0.91	1.35	105	0.2
Trichloroethene	µg/tube	7.27	±	0.832	7.13	1.14	1.11	98.1	-0.13
Trichloromethane	µg/tube	7.01	±	0.409	6.59	1.05	0.545	94	-0.77

* see Section 4 Explanatory Notes
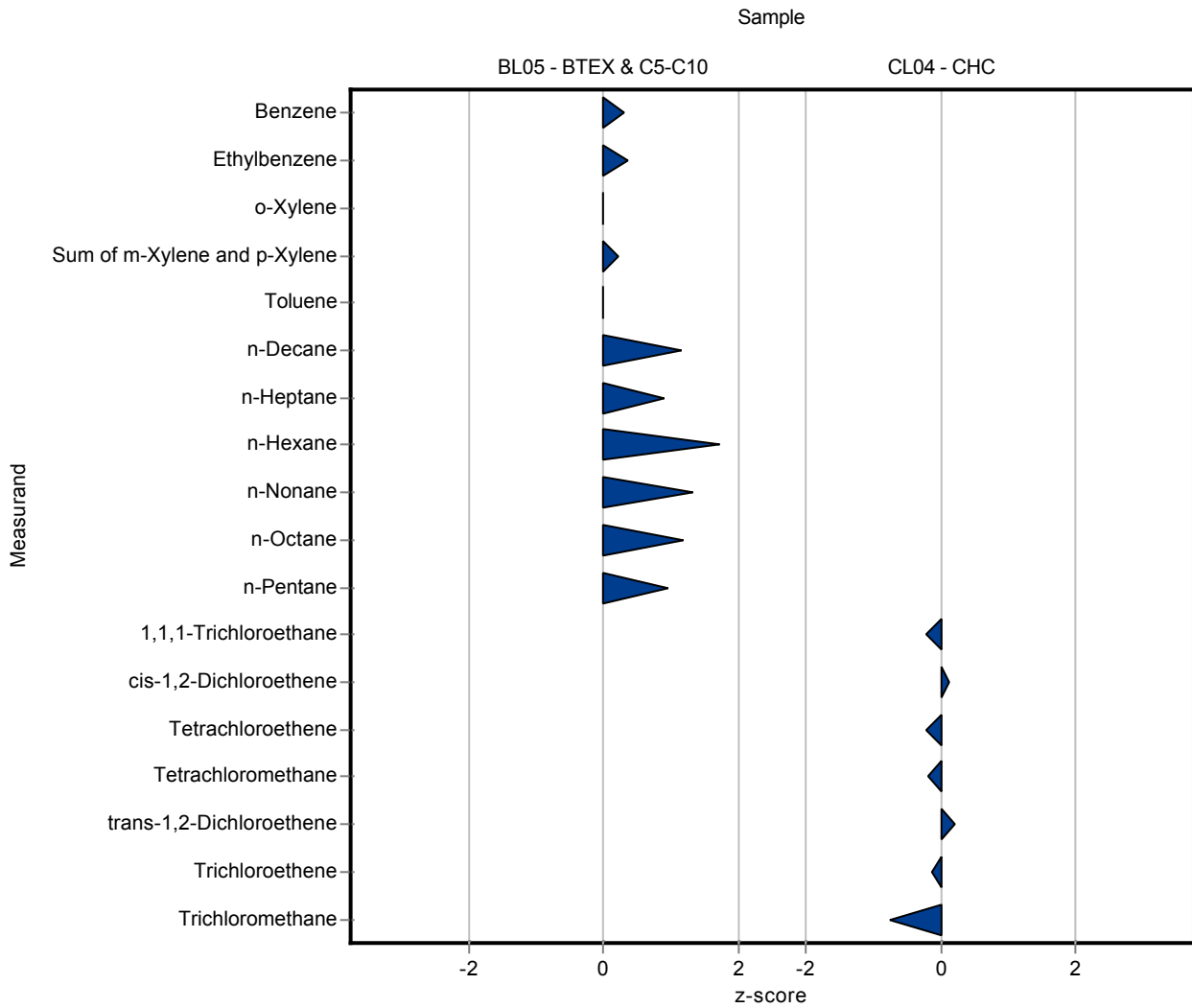
The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27	±	0.556	6.74	1.01	0.764	107	0.61
Ethylbenzene	µg/tube	7.45	±	1.03	8.33	1.25	1.5	112	0.59
o-Xylene	µg/tube	6.96	±	1.21	7.56	1.13	1.76	109	0.34
Sum of m-Xylene and p-Xylene	µg/tube	14.2	±	2.08	16.08	2.41	2.94	113	0.63
Toluene	µg/tube	6.95	±	0.856	7.71	1.16	1.21	111	0.63
n-Decane	µg/tube	5.76	±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76	±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54	±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7	±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23	±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54	±	2.54	-	-	3.17	-	-

Sample

BL05 - BTEX & C5-C10

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27	±	0.556	6.33	1.39	0.764	101	0.08
Ethylbenzene	µg/tube	7.45	±	1.03	7.6	1.67	1.5	102	0.1
o-Xylene	µg/tube	6.96	±	1.21	7.25	1.6	1.76	104	0.16
Sum of m-Xylene and p-Xylene	µg/tube	14.2	±	2.08	14.52	3.19	2.94	102	0.1
Toluene	µg/tube	6.95	±	0.856	6.81	1.5	1.21	98	-0.12
n-Decane	µg/tube	5.76	±	1.18	6.67	1.47	1.42	116	0.64
n-Heptane	µg/tube	8.76	±	1.24	8.46	1.86	1.61	96.6	-0.18
n-Hexane	µg/tube	7.54	±	1.27	8.4	1.68	1.41	111	0.61
n-Nonane	µg/tube	7.7	±	1.65	8.04	1.77	2.13	104	0.16
n-Octane	µg/tube	8.23	±	1.3	8.49	1.86	1.67	103	0.16
n-Pentane	µg/tube	8.54	±	2.54	9.6	2.11	3.17	112	0.34

Sample: CL04

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58	±	0.377	7.59	1.67	0.486	100	0.03
cis-1,2-Dichloroethene	µg/tube	5.42*	±	1.36	4.22	0.93	1.36	77.9	-0.88
Tetrachloroethene	µg/tube	8.63	±	0.993	8.53	1.88	1.36	98.9	-0.07
Tetrachloromethane	µg/tube	9.2	±	0.463	9.69	2.13	0.598	105	0.83
trans-1,2-Dichloroethene	µg/tube	5.4*	±	1.35	2.78	0.61	1.35	51.5	-1.94
Trichloroethene	µg/tube	7.27	±	0.832	7.28	1.6	1.11	100	0.01
Trichloromethane	µg/tube	7.01	±	0.409	7.04	1.55	0.545	100	0.06

* see Section 4 Explanatory Notes
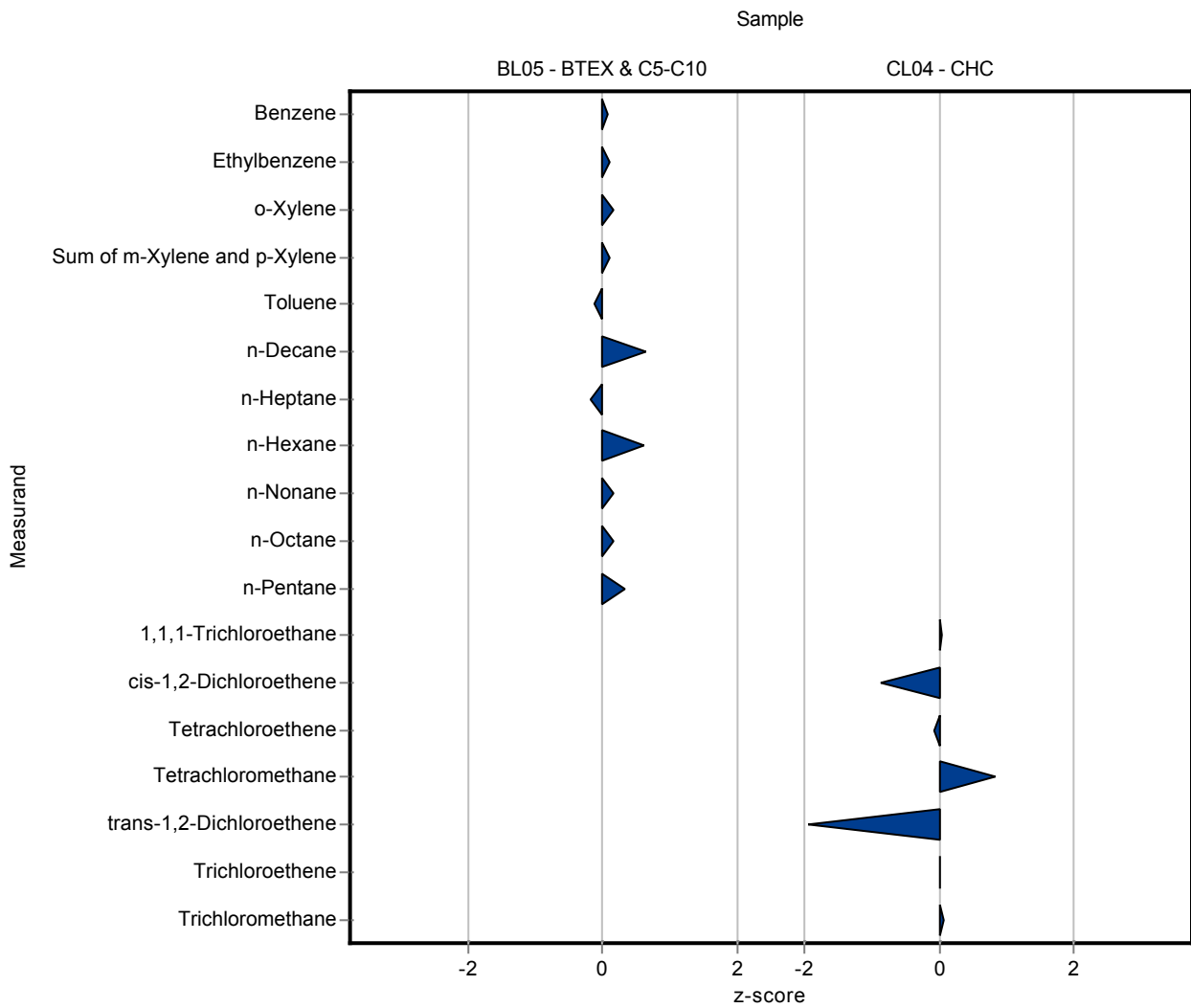
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	5.5	0.58	0.764	87.7	-1.01
Ethylbenzene	µg/tube	7.45 ±	1.03	7.1	1.12	1.5	95.3	-0.23
o-Xylene	µg/tube	6.96 ±	1.21	5.2	1.05	1.76	74.7	-1
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	12.2	2.28	2.94	85.8	-0.69
Toluene	µg/tube	6.95 ±	0.856	5.8	0.79	1.21	83.4	-0.95
n-Decane	µg/tube	5.76 ±	1.18	5.3	0.92	1.42	92	-0.32
n-Heptane	µg/tube	8.76 ±	1.24	9.1	0.84	1.61	104	0.21
n-Hexane	µg/tube	7.54 ±	1.27	8.9	1.26	1.41	118	0.97
n-Nonane	µg/tube	7.7 ±	1.65	7.1	1.35	2.13	92.2	-0.28
n-Octane	µg/tube	8.23 ±	1.3	8	1.27	1.67	97.2	-0.14
n-Pentane	µg/tube	8.54 ±	2.54	8.2	1.34	3.17	96	-0.11

Sample: CL04

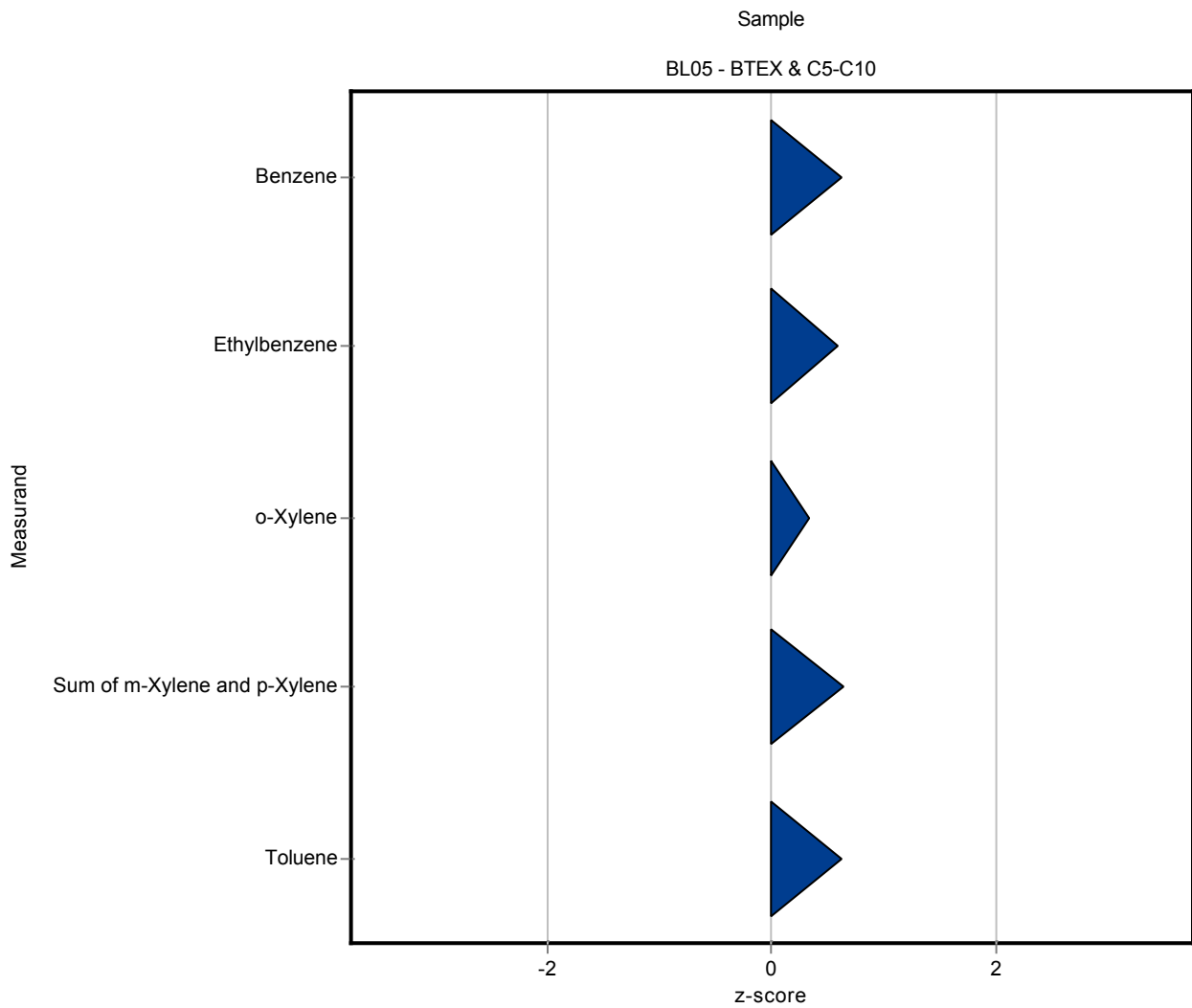| Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	9.3	3.3	0.486	123	3.54
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	1.4	0.33	1.36	25.8	-2.96
Tetrachloroethene	µg/tube	8.63 ±	0.993	10.5	2.63	1.36	122	1.37
Tetrachloromethane	µg/tube	9.2 ±	0.463	10.4	2.58	0.598	113	2.01
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	0.41	0.14	1.35	7.6	-3.7
Trichloroethene	µg/tube	7.27 ±	0.832	6.4	1.88	1.11	88	-0.78
Trichloromethane	µg/tube	7.01 ±	0.409	7.3	2.02	0.545	104	0.54

* see Section 4 Explanatory Notes
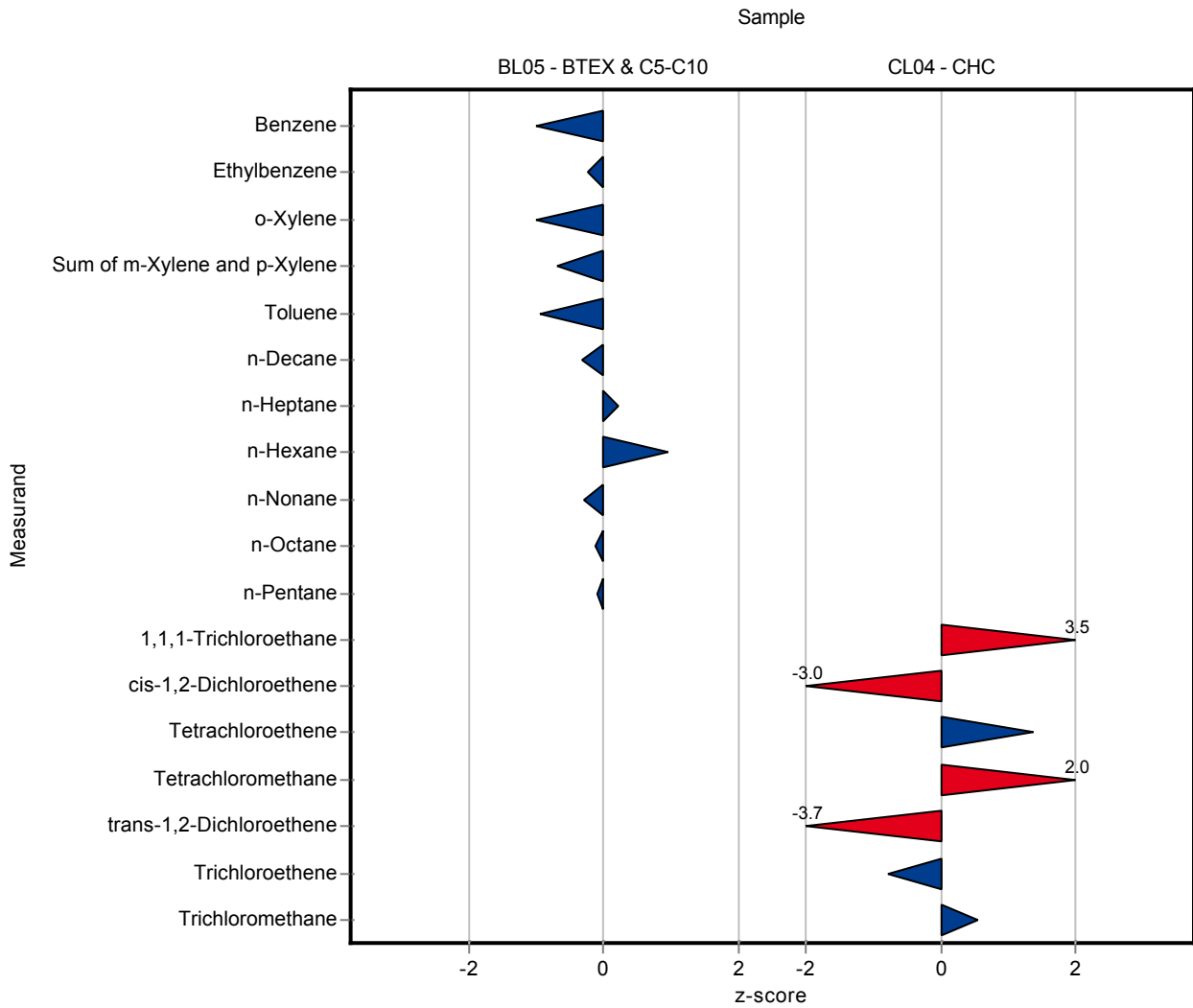
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	5.18	1.05	0.764	82.6	-1.43
Ethylbenzene	µg/tube	7.45 ±	1.03	6.14	1.22	1.5	82.4	-0.87
o-Xylene	µg/tube	6.96 ±	1.21	5.02	1	1.76	72.1	-1.1
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	28	3.46	2.94	197	4.69
Toluene	µg/tube	6.95 ±	0.856	5.34	1.05	1.21	76.8	-1.33
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.03	1.4	0.486	92.8	-1.13
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	3.1	0.6	1.36	57.2	-1.71
Tetrachloroethene	µg/tube	8.63 ±	0.993	8.39	1.7	1.36	97.3	-0.17
Tetrachloromethane	µg/tube	9.2 ±	0.463	8.43	1.7	0.598	91.7	-1.28
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	4.81	0.96	1.35	89.1	-0.44
Trichloroethene	µg/tube	7.27 ±	0.832	6.67	1.34	1.11	91.7	-0.54
Trichloromethane	µg/tube	7.01 ±	0.409	6.28	1.35	0.545	89.6	-1.33

* see Section 4 Explanatory Notes
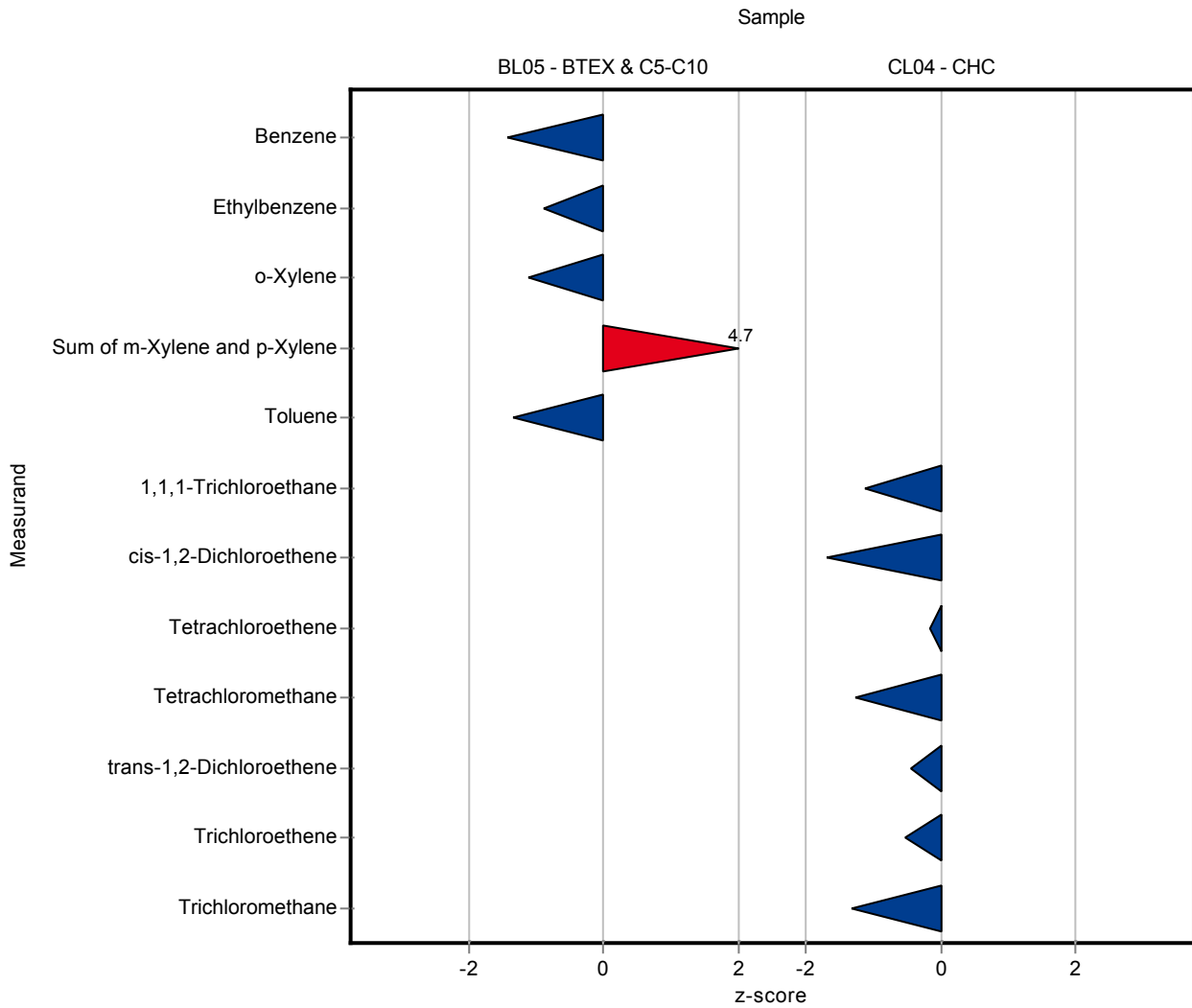
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value	±	CI(99%)	Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27	±	0.556	19.1	1	0.764	305	16.8
Ethylbenzene	µg/tube	7.45	±	1.03	9.93	0.5	1.5	133	1.65
o-Xylene	µg/tube	6.96	±	1.21	10.6	0.5	1.76	152	2.06
Sum of m-Xylene and p-Xylene	µg/tube	14.2	±	2.08	11.5	0.5	2.94	80.9	-0.92
Toluene	µg/tube	6.95	±	0.856	15.6	1	1.21	224	7.14
n-Decane	µg/tube	5.76	±	1.18	4.03	0.2	1.42	70	-1.22
n-Heptane	µg/tube	8.76	±	1.24	8.7	0.2	1.61	99.4	-0.03
n-Hexane	µg/tube	7.54	±	1.27	8.67	0.2	1.41	115	0.8
n-Nonane	µg/tube	7.7	±	1.65	7.67	0.2	2.13	99.6	-0.01
n-Octane	µg/tube	8.23	±	1.3	8.25	0.2	1.67	100	0.01
n-Pentane	µg/tube	8.54	±	2.54	8.67	0.2	3.17	102	0.04
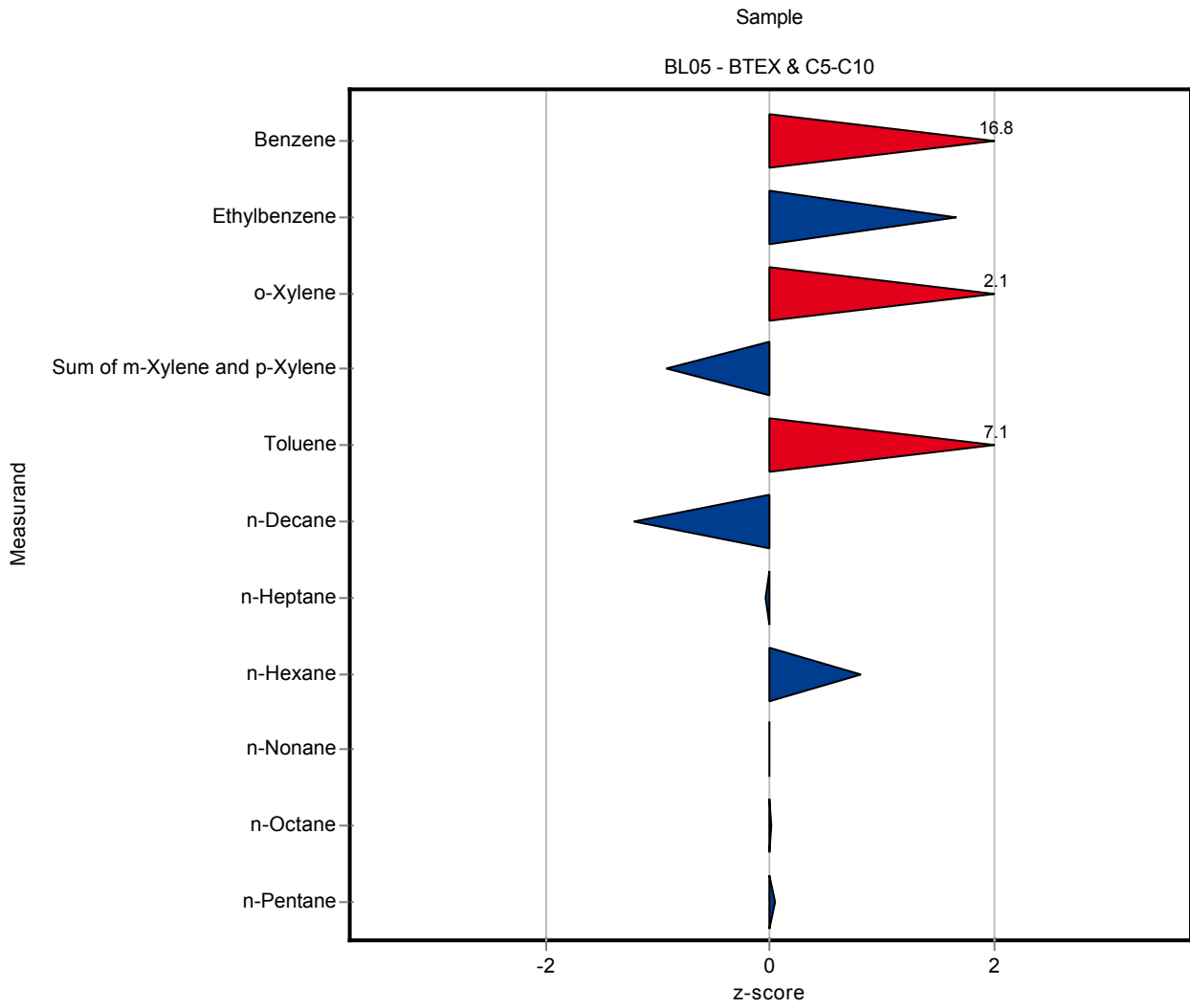
Sample

BL05 - BTEX & C5-C10

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.3	0.69	0.764	100	0.04
Ethylbenzene	µg/tube	7.45 ±	1.03	7.3	0.8	1.5	98	-0.1
o-Xylene	µg/tube	6.96 ±	1.21	6.11	0.67	1.76	87.7	-0.48
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	14.04	1.54	2.94	98.8	-0.06
Toluene	µg/tube	6.95 ±	0.856	6.95	0.76	1.21	100	0
n-Decane	µg/tube	5.76 ±	1.18	5.05	0.56	1.42	87.7	-0.5
n-Heptane	µg/tube	8.76 ±	1.24	6.59	0.72	1.61	75.3	-1.35
n-Hexane	µg/tube	7.54 ±	1.27	5.98	0.66	1.41	79.3	-1.11
n-Nonane	µg/tube	7.7 ±	1.65	6	0.66	2.13	77.9	-0.8
n-Octane	µg/tube	8.23 ±	1.3	6.61	0.73	1.67	80.3	-0.97
n-Pentane	µg/tube	8.54 ±	2.54	4.6	0.51	3.17	53.9	-1.24

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.75	0.85	0.486	102	0.35
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	1.7	0.19	1.36	31.4	-2.74
Tetrachloroethene	µg/tube	8.63 ±	0.993	8.55	0.94	1.36	99.1	-0.06
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.23	1.02	0.598	100	0.06
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	0.38	0.04	1.35	7	-3.72
Trichloroethene	µg/tube	7.27 ±	0.832	6.55	0.72	1.11	90.1	-0.65
Trichloromethane	µg/tube	7.01 ±	0.409	6.93	0.76	0.545	98.9	-0.14

* see Section 4 Explanatory Notes
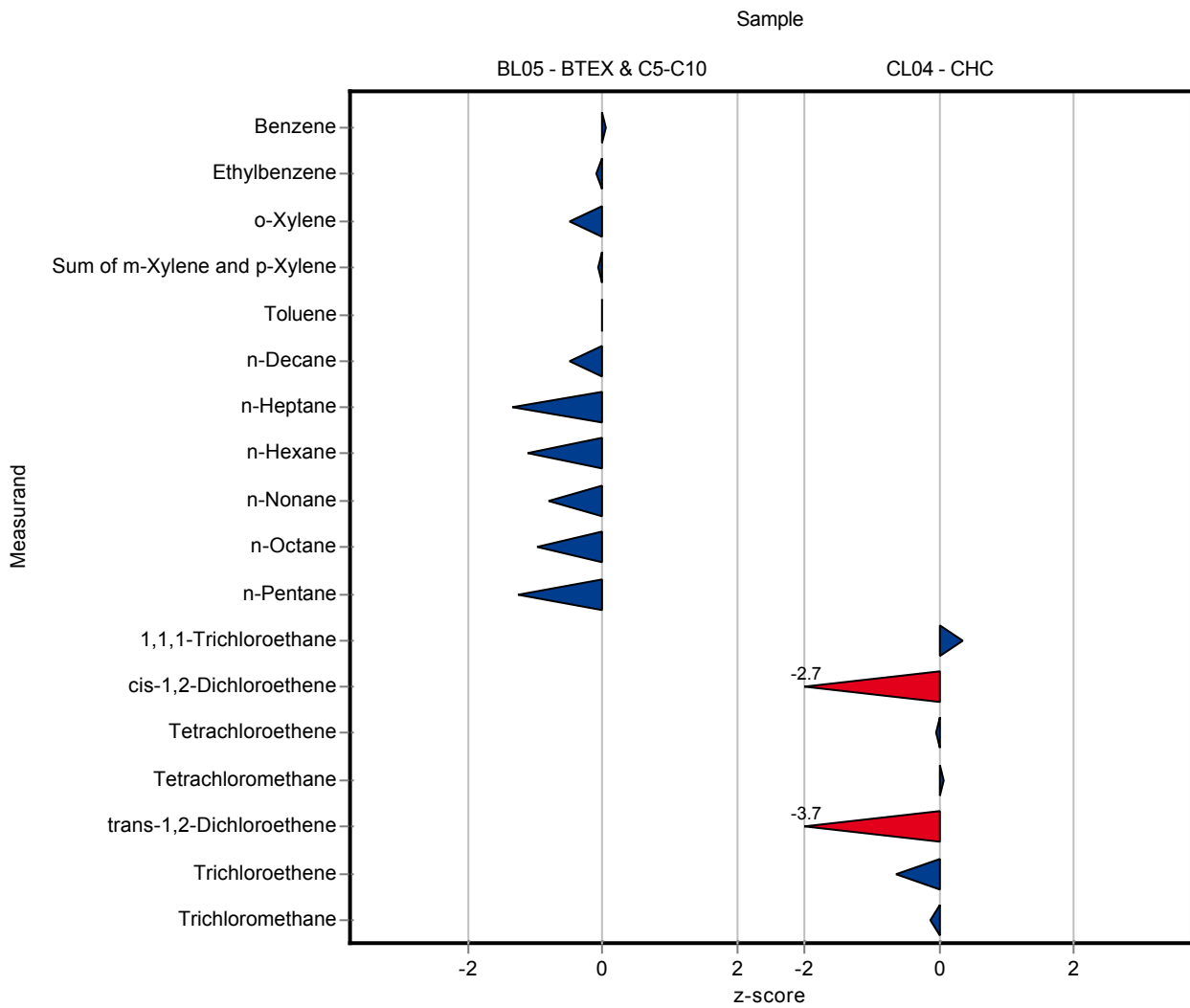
Sample

BL05 - BTEX & C5-C10   CL04 - CHC

z-score

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.55	1.31	0.764	104	0.36
Ethylbenzene	µg/tube	7.45 ±	1.03	8.83	1.76	1.5	119	0.92
o-Xylene	µg/tube	6.96 ±	1.21	8.24	1.65	1.76	118	0.72
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	15.94	3.19	2.94	112	0.59
Toluene	µg/tube	6.95 ±	0.856	7.35	1.47	1.21	106	0.33
n-Decane	µg/tube	5.76 ±	1.18	8.1	1.62	1.42	141	1.65
n-Heptane	µg/tube	8.76 ±	1.24	7.61	1.52	1.61	86.9	-0.71
n-Hexane	µg/tube	7.54 ±	1.27	6.9	1.38	1.41	91.5	-0.45
n-Nonane	µg/tube	7.7 ±	1.65	9.84	1.97	2.13	128	1
n-Octane	µg/tube	8.23 ±	1.3	8.44	1.86	1.67	103	0.13
n-Pentane	µg/tube	8.54 ±	2.54	6.7	1.34	3.17	78.5	-0.58

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.7	1.54	0.486	102	0.25
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	3.9	0.78	1.36	72	-1.12
Tetrachloroethene	µg/tube	8.63 ±	0.993	7.5	1.5	1.36	86.9	-0.83
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.28	1.85	0.598	101	0.14
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	2.7	0.54	1.35	50	-2
Trichloroethene	µg/tube	7.27 ±	0.832	7.1	1.42	1.11	97.7	-0.15
Trichloromethane	µg/tube	7.01 ±	0.409	6.2	1.24	0.545	88.5	-1.48

* see Section 4 Explanatory Notes
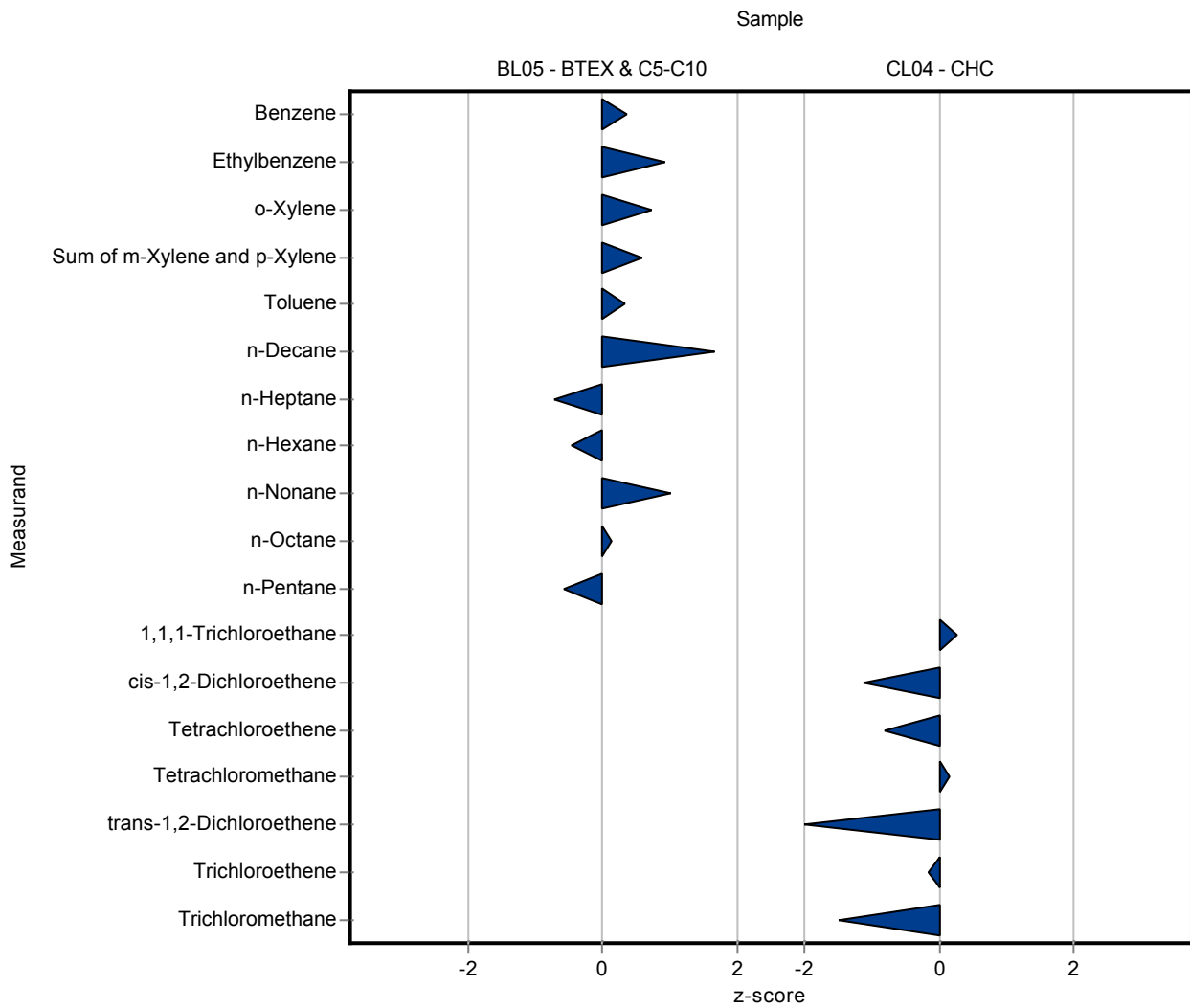
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.55	1.5	0.764	104	0.36
Ethylbenzene	µg/tube	7.45 ±	1.03	5.88	1.5	1.5	78.9	-1.05
o-Xylene	µg/tube	6.96 ±	1.21	6.19	1.5	1.76	88.9	-0.44
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	12.7	3	2.94	89.3	-0.52
Toluene	µg/tube	6.95 ±	0.856	6.04	1.5	1.21	86.9	-0.75
n-Decane	µg/tube	5.76 ±	1.18	6.41	1.5	1.42	111	0.46
n-Heptane	µg/tube	8.76 ±	1.24	11.5	3	1.61	131	1.71
n-Hexane	µg/tube	7.54 ±	1.27	18.1	4	1.41	240	7.51
n-Nonane	µg/tube	7.7 ±	1.65	7.76	2	2.13	101	0.03
n-Octane	µg/tube	8.23 ±	1.3	9.26	2	1.67	113	0.62
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	8.02	2	0.486	106	0.91
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	5.98	1.5	1.36	110	0.41
Tetrachloroethene	µg/tube	8.63 ±	0.993	7.49	1.5	1.36	86.8	-0.83
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.38	2	0.598	102	0.31
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	6.3	1.5	1.35	117	0.67
Trichloroethene	µg/tube	7.27 ±	0.832	7.16	1.5	1.11	98.5	-0.1
Trichloromethane	µg/tube	7.01 ±	0.409	6.86	1.5	0.545	97.9	-0.27

* see Section 4 Explanatory Notes
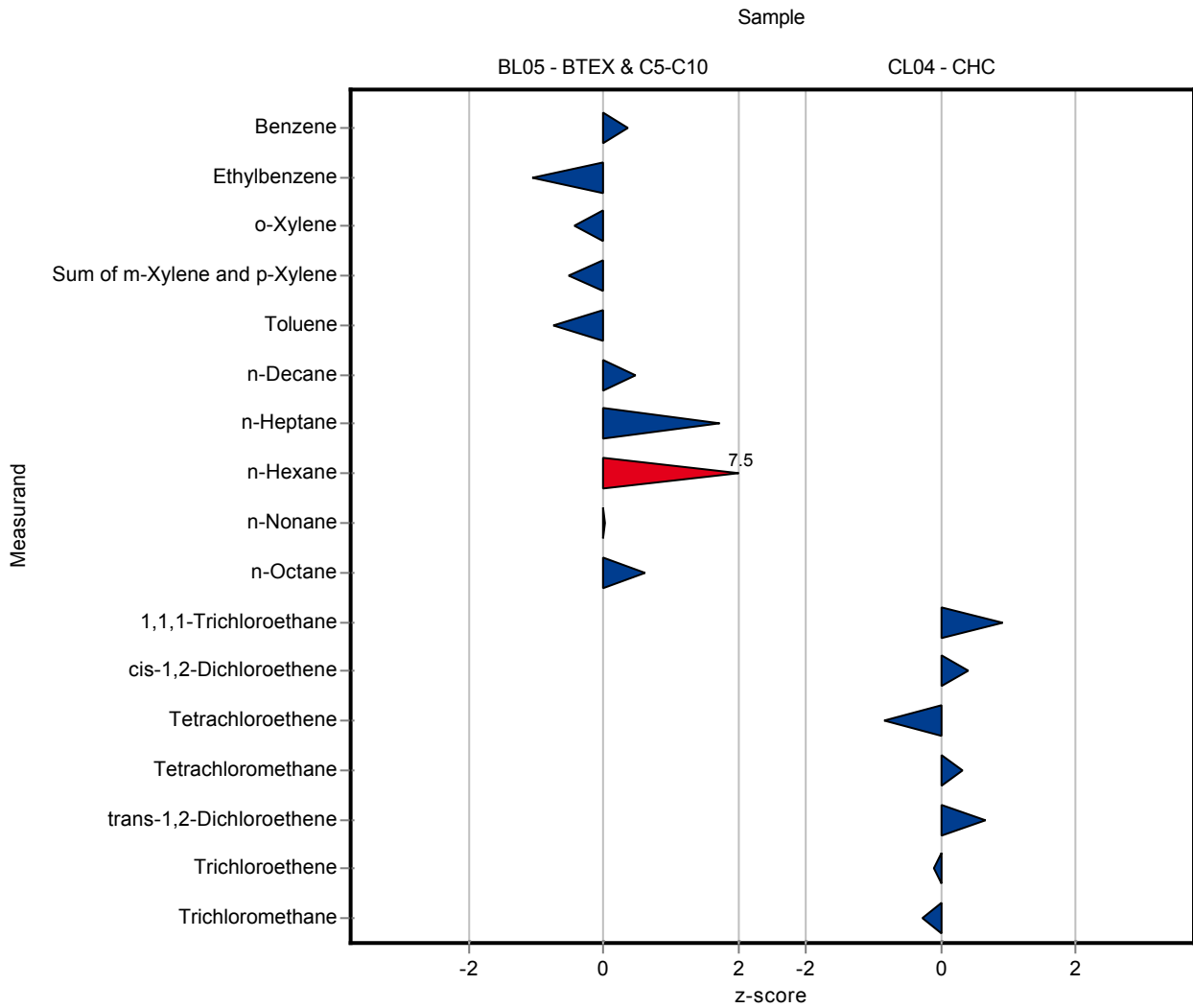
Sample

BL05 - BTEX & C5-C10   CL04 - CHC

z-score

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.2	2	0.764	98.9	-0.09
Ethylbenzene	µg/tube	7.45 ±	1.03	6.5	2	1.5	87.3	-0.63
o-Xylene	µg/tube	6.96 ±	1.21	6.6	2	1.76	94.8	-0.21
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	14	3	2.94	98.5	-0.07
Toluene	µg/tube	6.95 ±	0.856	6	2	1.21	86.3	-0.79
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.7	2	0.486	102	0.25
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	5.7	1	1.36	105	0.21
Tetrachloroethene	µg/tube	8.63 ±	0.993	8.3	2	1.36	96.2	-0.24
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.5	2	0.598	103	0.51
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	5.9	1	1.35	109	0.37
Trichloroethene	µg/tube	7.27 ±	0.832	6.9	2	1.11	94.9	-0.33
Trichloromethane	µg/tube	7.01 ±	0.409	7	2	0.545	99.9	-0.01

* see Section 4 Explanatory Notes
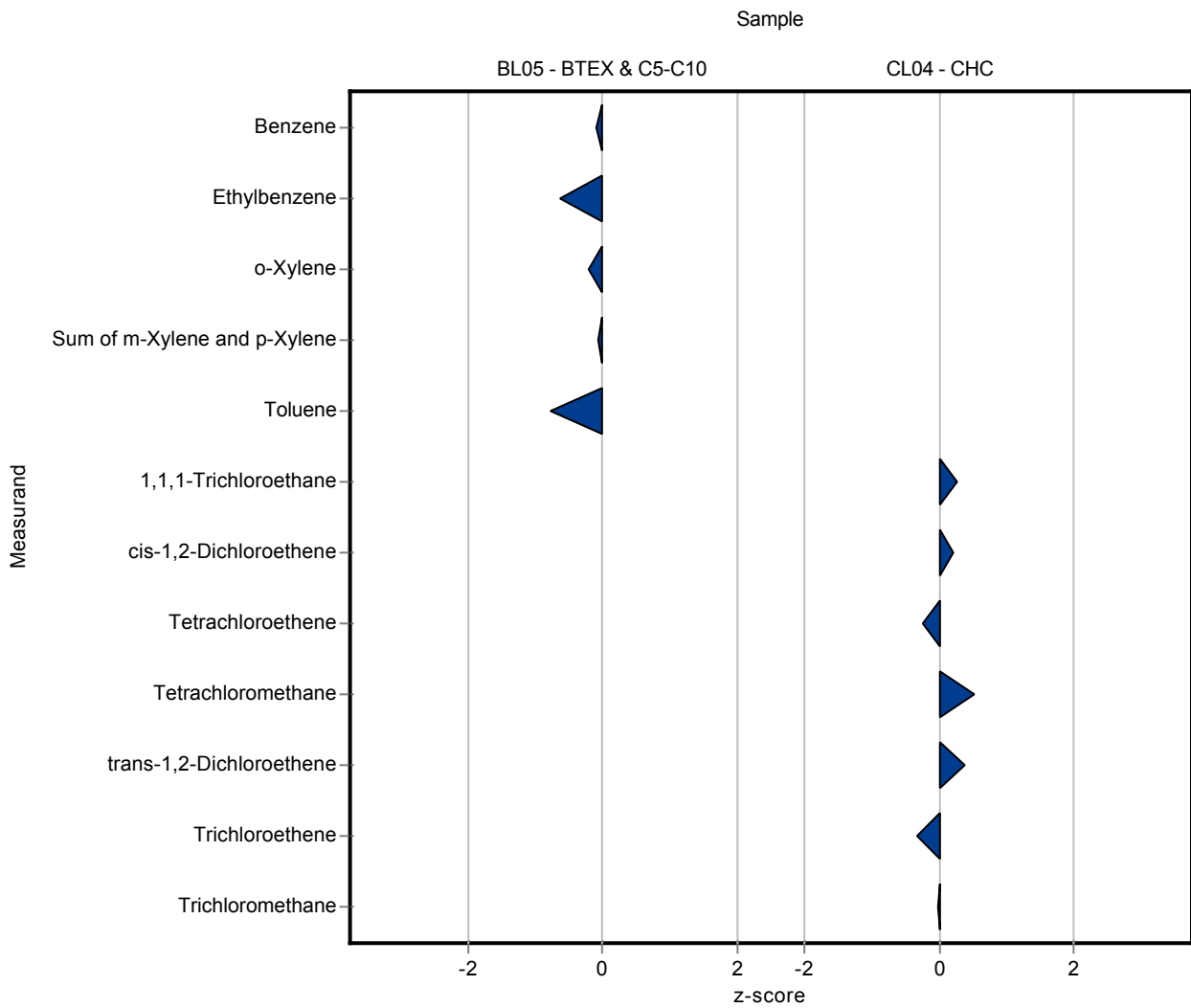
Sample

BL05 - BTEX & C5-C10   CL04 - CHC

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	4.2	0.4	0.764	67	-2.71
Ethylbenzene	µg/tube	7.45 ±	1.03	5.6	0.6	1.5	75.2	-1.23
o-Xylene	µg/tube	6.96 ±	1.21	4	0.4	1.76	57.4	-1.68
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	9.8	1	2.94	68.9	-1.5
Toluene	µg/tube	6.95 ±	0.856	5.8	0.6	1.21	83.4	-0.95
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	6.3	0.6	0.486	83.1	-2.63
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	<5 (LOQ)	-	1.36	-	-
Tetrachloroethene	µg/tube	8.63 ±	0.993	7.2	0.7	1.36	83.5	-1.05
Tetrachloromethane	µg/tube	9.2 ±	0.463	8	0.8	0.598	87	-2
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	-	-	1.35	-	-
Trichloroethene	µg/tube	7.27 ±	0.832	4.5	0.5	1.11	61.9	-2.5
Trichloromethane	µg/tube	7.01 ±	0.409	4.9	0.5	0.545	69.9	-3.86

* see Section 4 Explanatory Notes
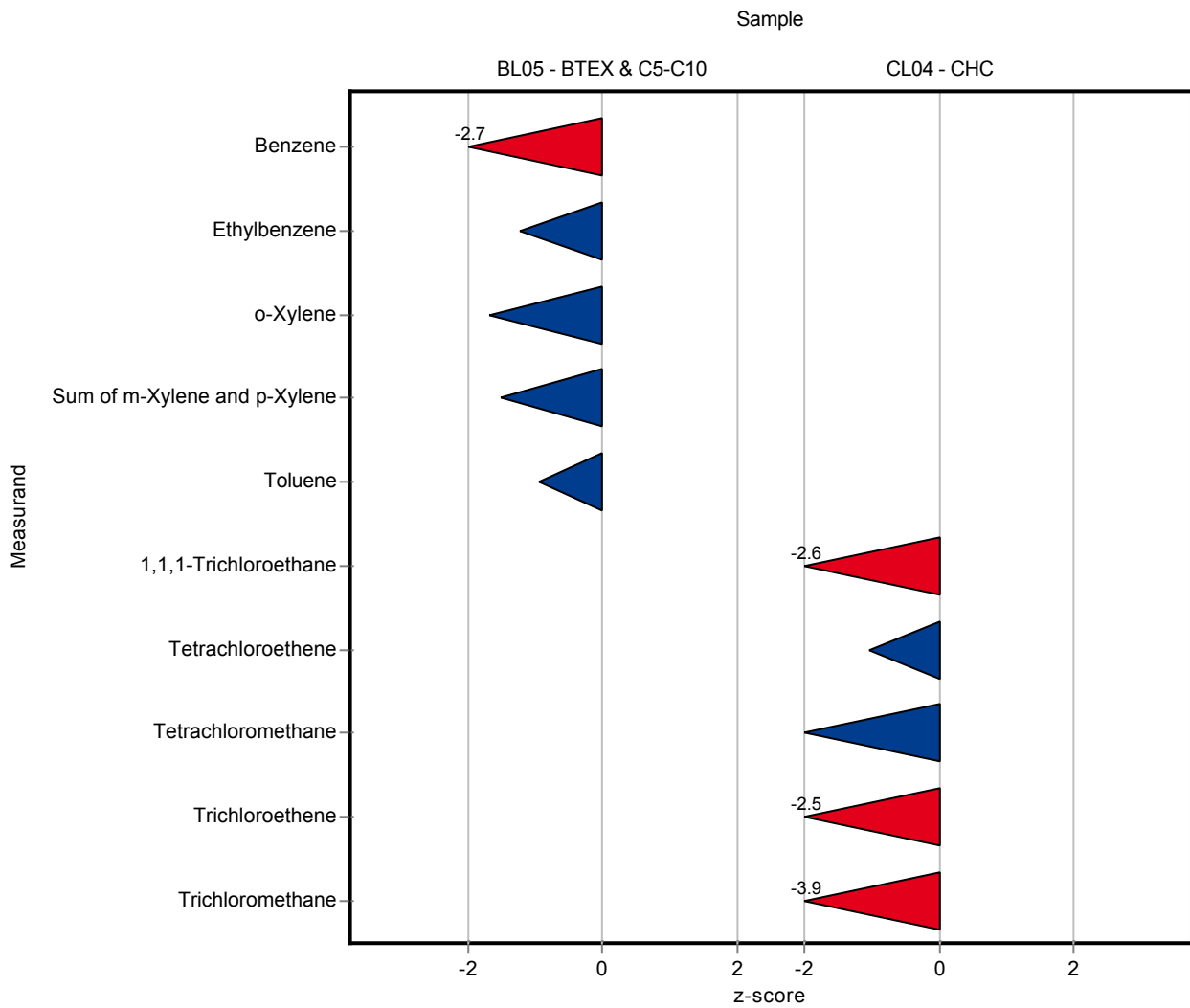
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	7.44	0.695	0.764	119	1.53
Ethylbenzene	µg/tube	7.45 ±	1.03	10.75	0.41	1.5	144	2.2
o-Xylene	µg/tube	6.96 ±	1.21	10.967	0.543	1.76	157	2.27
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	22.473	1.148	2.94	158	2.81
Toluene	µg/tube	6.95 ±	0.856	10.72	0.465	1.21	154	3.11
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.363	0.867	0.486	97.2	-0.44
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	6.82	0.754	1.36	126	1.03
Tetrachloroethene	µg/tube	8.63 ±	0.993	8.603	0.633	1.36	99.7	-0.02
Tetrachloromethane	µg/tube	9.2 ±	0.463	8.513	0.799	0.598	92.6	-1.14
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	4.413	0.352	1.35	81.7	-0.73
Trichloroethene	µg/tube	7.27 ±	0.832	8.653	0.297	1.11	119	1.25
Trichloromethane	µg/tube	7.01 ±	0.409	7.68	0.661	0.545	110	1.23

* see Section 4 Explanatory Notes
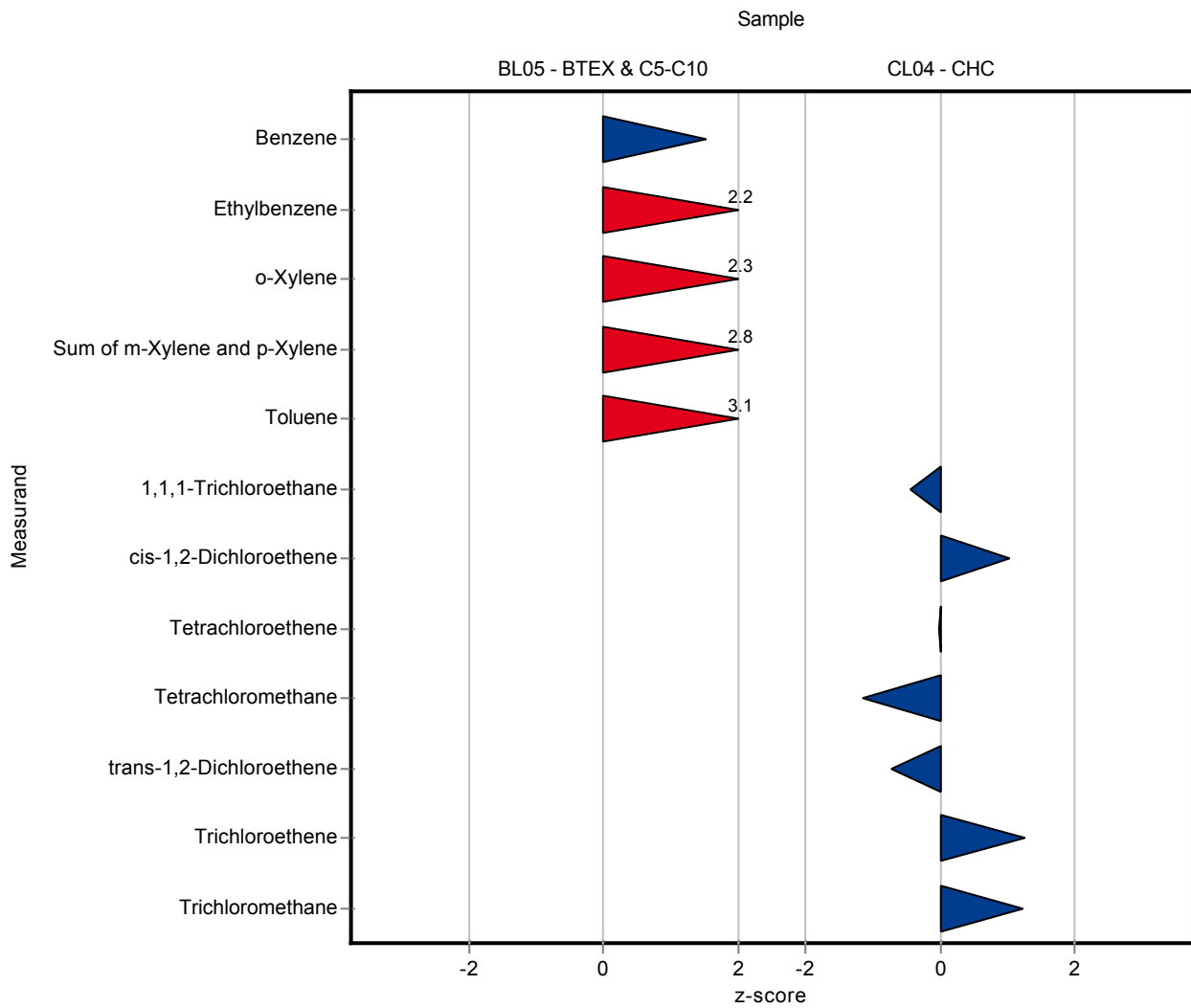
Sample

BL05 - BTEX & C5-C10   CL04 - CHC

z-score

The following results were achieved:

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.57	-	0.486	99.9	-0.01
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	5.52	-	1.36	102	0.07
Tetrachloroethene	µg/tube	8.63 ±	0.993	8.5	-	1.36	98.5	-0.09
Tetrachloromethane	µg/tube	9.2 ±	0.463	8.78	-	0.598	95.5	-0.69
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	5.56	-	1.35	103	0.12
Trichloroethene	µg/tube	7.27 ±	0.832	7.3	-	1.11	100	0.03
Trichloromethane	µg/tube	7.01 ±	0.409	7.08	-	0.545	101	0.13

* see Section 4 Explanatory Notes
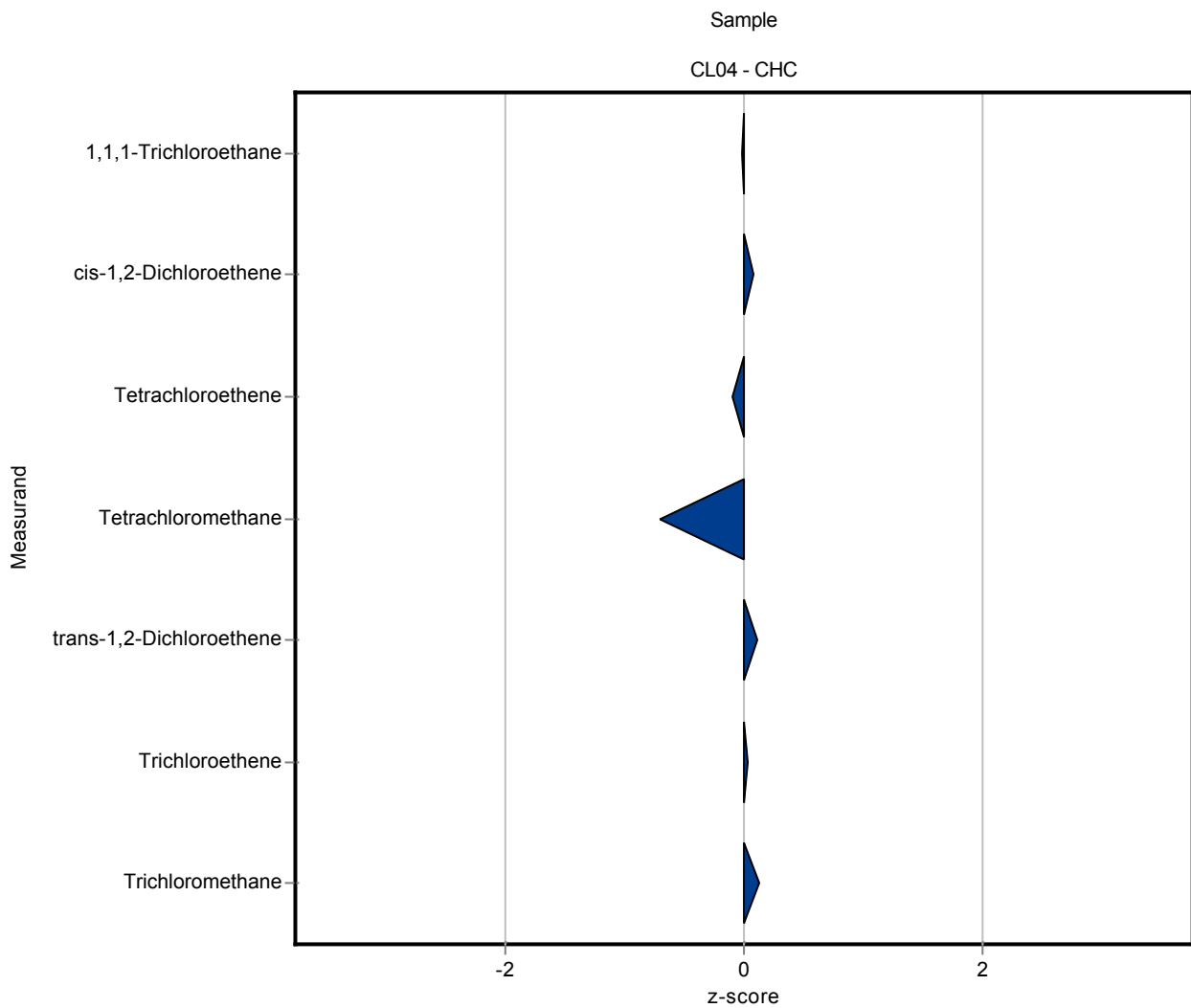
Sample

CL04 - CHC

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	12	2.4	0.764	191	7.5
Ethylbenzene	µg/tube	7.45 ±	1.03	14	2.8	1.5	188	4.37
o-Xylene	µg/tube	6.96 ±	1.21	13	2.6	1.76	187	3.43
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	53	10.6	2.94	373	13.2
Toluene	µg/tube	6.95 ±	0.856	13	2.6	1.21	187	5
n-Decane	µg/tube	5.76 ±	1.18	7	1.4	1.42	122	0.88
n-Heptane	µg/tube	8.76 ±	1.24	8.4	1.7	1.61	95.9	-0.22
n-Hexane	µg/tube	7.54 ±	1.27	<1 (LOQ)	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	8.3	1.7	2.13	108	0.28
n-Octane	µg/tube	8.23 ±	1.3	8.6	1.7	1.67	105	0.22
n-Pentane	µg/tube	8.54 ±	2.54	12	2.4	3.17	141	1.09

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	14	2.8	0.486	185	13.2
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	11	2.2	1.36	203	4.1
Tetrachloroethene	µg/tube	8.63 ±	0.993	14	2.8	1.36	162	3.94
Tetrachloromethane	µg/tube	9.2 ±	0.463	16	3.2	0.598	174	11.4
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	11	2.2	1.35	204	4.15
Trichloroethene	µg/tube	7.27 ±	0.832	13	2.6	1.11	179	5.17
Trichloromethane	µg/tube	7.01 ±	0.409	13	2.6	0.545	186	11

* see Section 4 Explanatory Notes
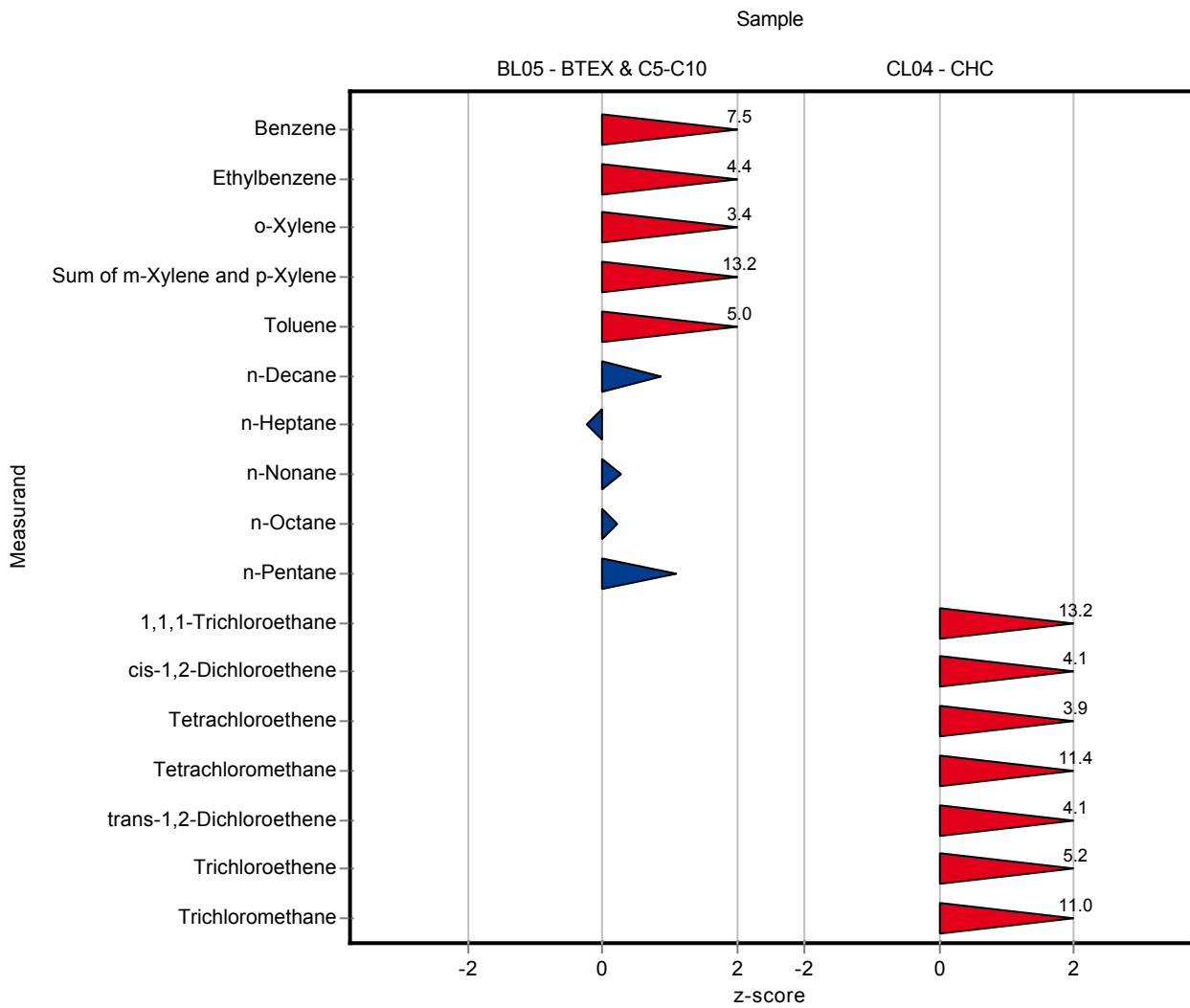
Sample

BL05 - BTEX & C5-C10   CL04 - CHC

Benzene — 7.5
Ethylbenzene — 4.4
o-Xylene — 3.4
Sum of m-Xylene and p-Xylene — 13.2
Toluene — 5.0
n-Decane —
n-Heptane —
n-Nonane —
n-Octane —
n-Pentane —
1,1,1-Trichloroethane — 13.2
cis-1,2-Dichloroethene — 4.1
Tetrachloroethene — 3.9
Tetrachloromethane — 11.4
trans-1,2-Dichloroethene — 4.1
Trichloroethene — 5.2
Trichloromethane — 11.0

Measurand

z-score

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.54	-	0.764	104	0.35
Ethylbenzene	µg/tube	7.45 ±	1.03	5.16	-	1.5	69.3	-1.53
o-Xylene	µg/tube	6.96 ±	1.21	4.58	-	1.76	65.8	-1.35
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	10	-	2.94	70.3	-1.43
Toluene	µg/tube	6.95 ±	0.856	8.09	-	1.21	116	0.94
n-Decane	µg/tube	5.76 ±	1.18	3.98	-	1.42	69.1	-1.26
n-Heptane	µg/tube	8.76 ±	1.24	9.39	-	1.61	107	0.4
n-Hexane	µg/tube	7.54 ±	1.27	21.5	-	1.41	285	9.93
n-Nonane	µg/tube	7.7 ±	1.65	5.5	-	2.13	71.4	-1.03
n-Octane	µg/tube	8.23 ±	1.3	6.72	-	1.67	81.7	-0.9
n-Pentane	µg/tube	8.54 ±	2.54	13	-	3.17	152	1.41

Sample

BL05 - BTEX & C5-C10

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	1.68	0.01	0.764	26.8	-6.01
Ethylbenzene	µg/tube	7.45 ±	1.03	1.39	0.01	1.5	18.7	-4.04
o-Xylene	µg/tube	6.96 ±	1.21	1.1	0.01	1.76	15.8	-3.33
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	2.76	0.01	2.94	19.4	-3.9
Toluene	µg/tube	6.95 ±	0.856	1.19	0.01	1.21	17.1	-4.76
n-Decane	µg/tube	5.76 ±	1.18	4.42	0.01	1.42	76.8	-0.94
n-Heptane	µg/tube	8.76 ±	1.24	9.11	0.01	1.61	104	0.22
n-Hexane	µg/tube	7.54 ±	1.27	15.67	0.01	1.41	208	5.78
n-Nonane	µg/tube	7.7 ±	1.65	5.08	0.01	2.13	66	-1.23
n-Octane	µg/tube	8.23 ±	1.3	5.93	0.01	1.67	72.1	-1.37
n-Pentane	µg/tube	8.54 ±	2.54	2.72	0.01	3.17	31.9	-1.84

Sample: CL04

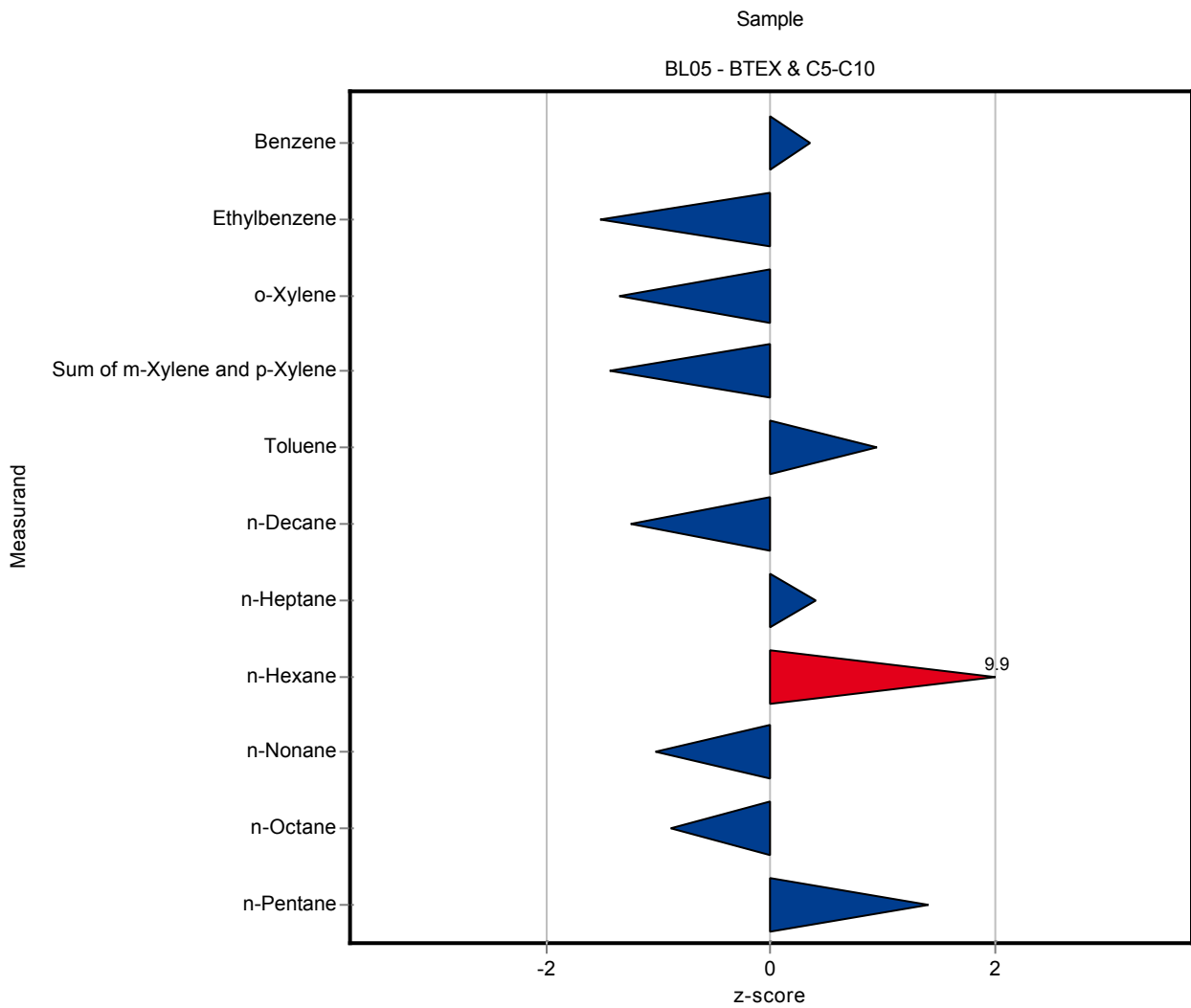| Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	2.86	0.01	0.486	37.7	-9.7
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	1.51	0.01	1.36	27.9	-2.88
Tetrachloroethene	µg/tube	8.63 ±	0.993	2.63	0.01	1.36	30.5	-4.39
Tetrachloromethane	µg/tube	9.2 ±	0.463	3.55	0.01	0.598	38.6	-9.44
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	1.87	0.01	1.35	34.6	-2.61
Trichloroethene	µg/tube	7.27 ±	0.832	2.4	0.01	1.11	33	-4.39
Trichloromethane	µg/tube	7.01 ±	0.409	1.89	0.01	0.545	27	-9.38

* see Section 4 Explanatory Notes
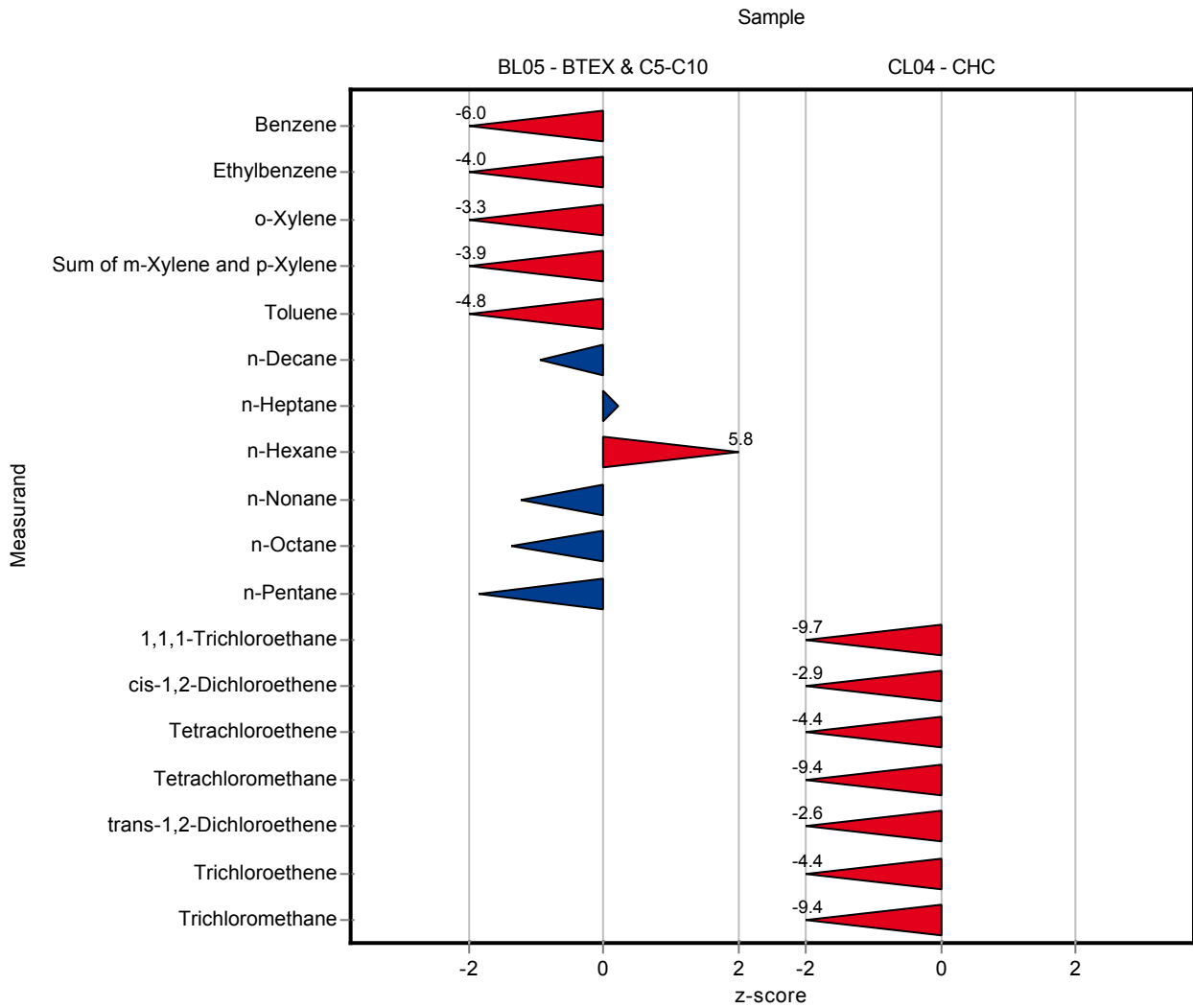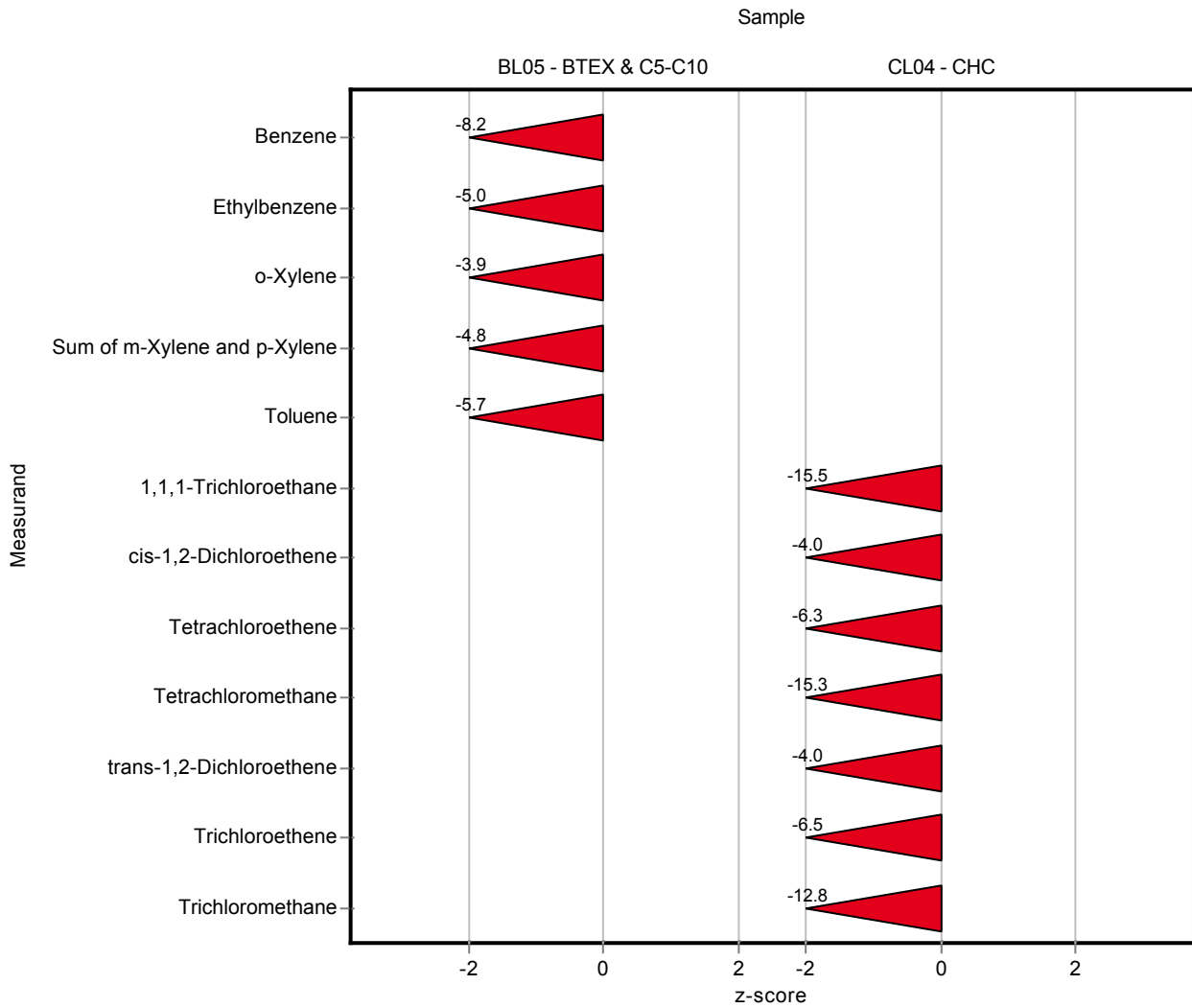
The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	0.019	0.004	0.764	0.3	-8.18
Ethylbenzene	µg/tube	7.45 ±	1.03	0.019	0.004	1.5	0.3	-4.95
o-Xylene	µg/tube	6.96 ±	1.21	0.02	0.004	1.76	0.3	-3.94
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	0.041	0.008	2.94	0.3	-4.82
Toluene	µg/tube	6.95 ±	0.856	0.019	0.004	1.21	0.3	-5.72
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	-	-	1.61	-	-
n-Hexane	µg/tube	7.54 ±	1.27	-	-	1.41	-	-
n-Nonane	µg/tube	7.7 ±	1.65	-	-	2.13	-	-
n-Octane	µg/tube	8.23 ±	1.3	-	-	1.67	-	-
n-Pentane	µg/tube	8.54 ±	2.54	-	-	3.17	-	-

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	0.024	0.006	0.486	0.3	-15.5
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	0.012	0.002	1.36	0.2	-3.98
Tetrachloroethene	µg/tube	8.63 ±	0.993	0.027	0.006	1.36	0.3	-6.3
Tetrachloromethane	µg/tube	9.2 ±	0.463	0.031	0.006	0.598	0.3	-15.3
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	0.007	0.002	1.35	0.1	-3.99
Trichloroethene	µg/tube	7.27 ±	0.832	0.02	0.004	1.11	0.3	-6.54
Trichloromethane	µg/tube	7.01 ±	0.409	0.021	0.004	0.545	0.3	-12.8

* see Section 4 Explanatory Notes

Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	6.045	0.17	0.764	96.4	-0.3
Ethylbenzene	µg/tube	7.45 ±	1.03	6.783	0.28	1.5	91.1	-0.44
o-Xylene	µg/tube	6.96 ±	1.21	6.406	0.29	1.76	92	-0.32
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	12.99	0.44	2.94	91.4	-0.42
Toluene	µg/tube	6.95 ±	0.856	6.496	0.2	1.21	93.5	-0.38
n-Decane	µg/tube	5.76 ±	1.18	-	-	1.42	-	-
n-Heptane	µg/tube	8.76 ±	1.24	7.68	0.15	1.61	87.7	-0.67
n-Hexane	µg/tube	7.54 ±	1.27	7.32	0.14	1.41	97.1	-0.16
n-Nonane	µg/tube	7.7 ±	1.65	6.34	0.029	2.13	82.3	-0.64
n-Octane	µg/tube	8.23 ±	1.3	7.51	0.067	1.67	91.3	-0.43
n-Pentane	µg/tube	8.54 ±	2.54	6.65	0.22	3.17	77.9	-0.6

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.895	0.14	0.486	104	0.65
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	4.03	0.27	1.36	74.4	-1.02
Tetrachloroethene	µg/tube	8.63 ±	0.993	9.258	0.062	1.36	107	0.46
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.264	0.1	0.598	101	0.12
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	2.924	0.29	1.35	54.1	-1.83
Trichloroethene	µg/tube	7.27 ±	0.832	7.556	0.33	1.11	104	0.26
Trichloromethane	µg/tube	7.01 ±	0.409	6.471	1.18	0.545	92.4	-0.98

* see Section 4 Explanatory Notes
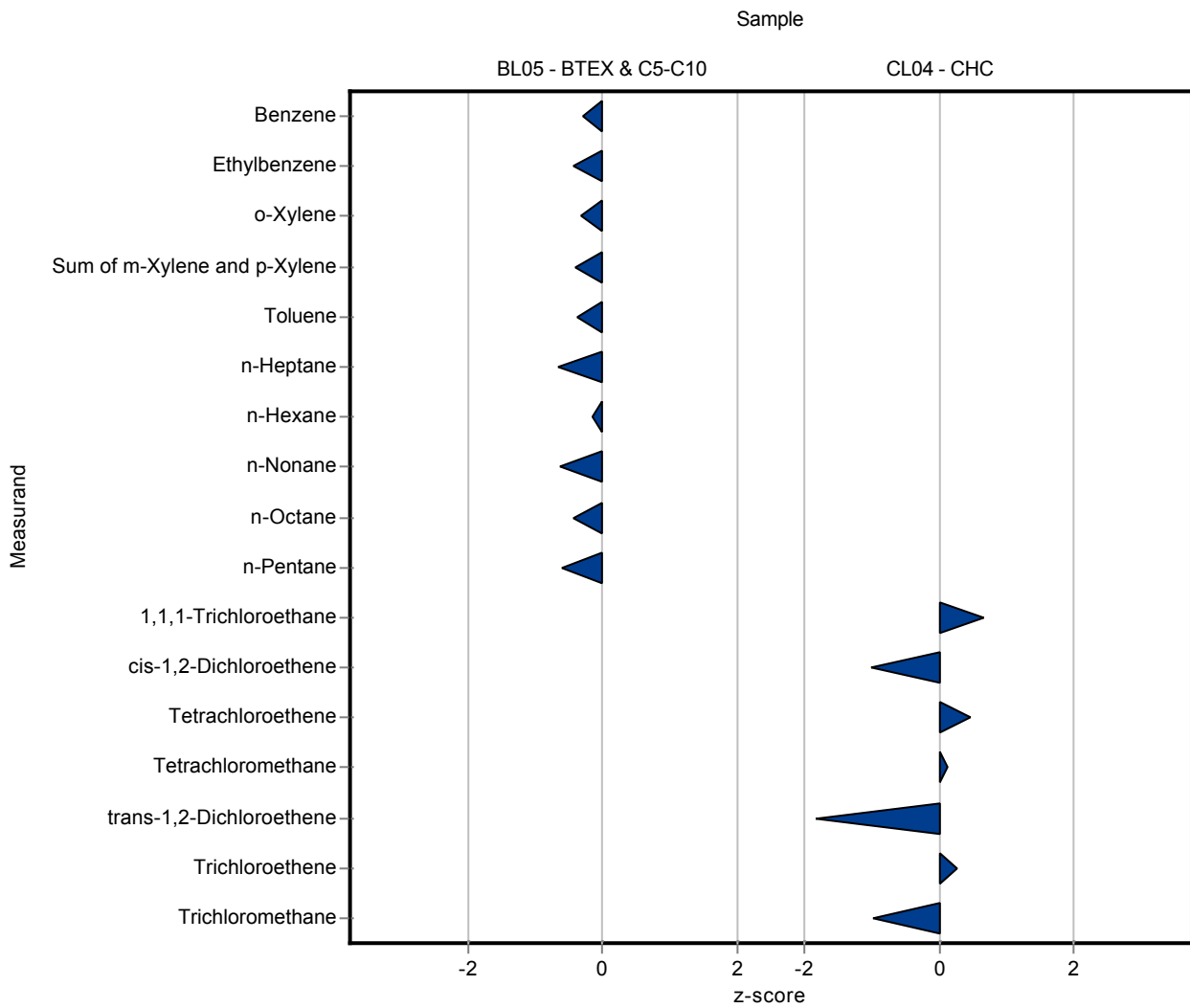
Sample

The following results were achieved:

Sample: BL05

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
Benzene	µg/tube	6.27 ±	0.556	7.27	-	0.764	116	1.31
Ethylbenzene	µg/tube	7.45 ±	1.03	6.09	-	1.5	81.7	-0.91
o-Xylene	µg/tube	6.96 ±	1.21	7.18	-	1.76	103	0.12
Sum of m-Xylene and p-Xylene	µg/tube	14.2 ±	2.08	13.6	-	2.94	95.7	-0.21
Toluene	µg/tube	6.95 ±	0.856	6.34	1.05	1.21	91.2	-0.5
n-Decane	µg/tube	5.76 ±	1.18	4	-	1.42	69.5	-1.24
n-Heptane	µg/tube	8.76 ±	1.24	7.4	-	1.61	84.5	-0.84
n-Hexane	µg/tube	7.54 ±	1.27	5.2	-	1.41	69	-1.66
n-Nonane	µg/tube	7.7 ±	1.65	5.8	-	2.13	75.3	-0.89
n-Octane	µg/tube	8.23 ±	1.3	7.2	-	1.67	87.5	-0.61
n-Pentane	µg/tube	8.54 ±	2.54	10.6	-	3.17	124	0.65

Sample: CL04

Parameter	Unit	Target Value ± CI(99%)		Result	± U	Criteria	Recovery [%]	z-score
1,1,1-Trichloroethane	µg/tube	7.58 ±	0.377	7.76	-	0.486	102	0.38
cis-1,2-Dichloroethene	µg/tube	5.42* ±	1.36	5.88	-	1.36	108	0.34
Tetrachloroethene	µg/tube	8.63 ±	0.993	8.39	1.4	1.36	97.3	-0.17
Tetrachloromethane	µg/tube	9.2 ±	0.463	9.28	-	0.598	101	0.14
trans-1,2-Dichloroethene	µg/tube	5.4* ±	1.35	5.4	-	1.35	100	0
Trichloroethene	µg/tube	7.27 ±	0.832	7.82	-	1.11	108	0.5
Trichloromethane	µg/tube	7.01 ±	0.409	7.19	-	0.545	103	0.34

* see Section 4 Explanatory Notes

Sample

BL05 - BTEX & C5-C10   CL04 - CHC

z-score